

ÇUKURİÇİ HÖYÜK 4
HOUSEHOLD ECONOMICS
IN THE EARLY BRONZE AGE AEGEAN

SABINA CVEČEK

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Household Economics in the Early Bronze Age Aegean

AUSTRIAN ACADEMY OF SCIENCES
Austrian Archaeological Institute
Department of Prehistory & West Asian/Northeast African Archaeology

Oriental and European Archaeology

Volume 25

Series Editor: Barbara Horejs

Publications Coordinator: Ulrike Schuh

Sabina Cveček

Çukuriçi Höyük 4

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AUSTRIAN
ACADEMY
OF SCIENCES
PRESS

Accepted by the Publication Committee of the Division of Humanities
and the Social Sciences of the Austrian Academy of Sciences:

Michael Alram, Andre Gingrich, Hermann Hunger, Sigrid Jalkotzy-Deger, Renate Pillinger,
Franz Rainer, Oliver Jens Schmitt, Danuta Shanzer, Peter Wiesinger, Waldemar Zacharasiewicz

Printed with support from the Holzhausen-Legat of the Austrian Academy of Sciences
and the Department of Social and Cultural Anthropology of the University of Vienna.



The research published in this book was funded in the framework of the Austrian Academy of Sciences
DOC-Team and Post-DocTrack-programme and supported by



Published with the support of the Open Access Fund of the Austrian Academy of Sciences.

Picture on the opposite page:

Graphic depiction of metalworking as a household activity at Early Bronze Age Çukuriçi Höyük by Bettina Egger

This publication was subject to international and anonymous peer review.
Peer review is an essential part of the Austrian Academy of Sciences Press evaluation process. Before any book can
be accepted for publication, it is assessed by international specialists and ultimately must be approved by the
Austrian Academy of Sciences Publication Committee.

The paper used in this publication is DIN EN ISO 9706 certified
and meets the requirements for permanent archiving of written cultural property.

English language editing: Nicola Wood
Graphics and layout: Daniela Seiler
Coverdesign: Mario Börner, Angela Schwab

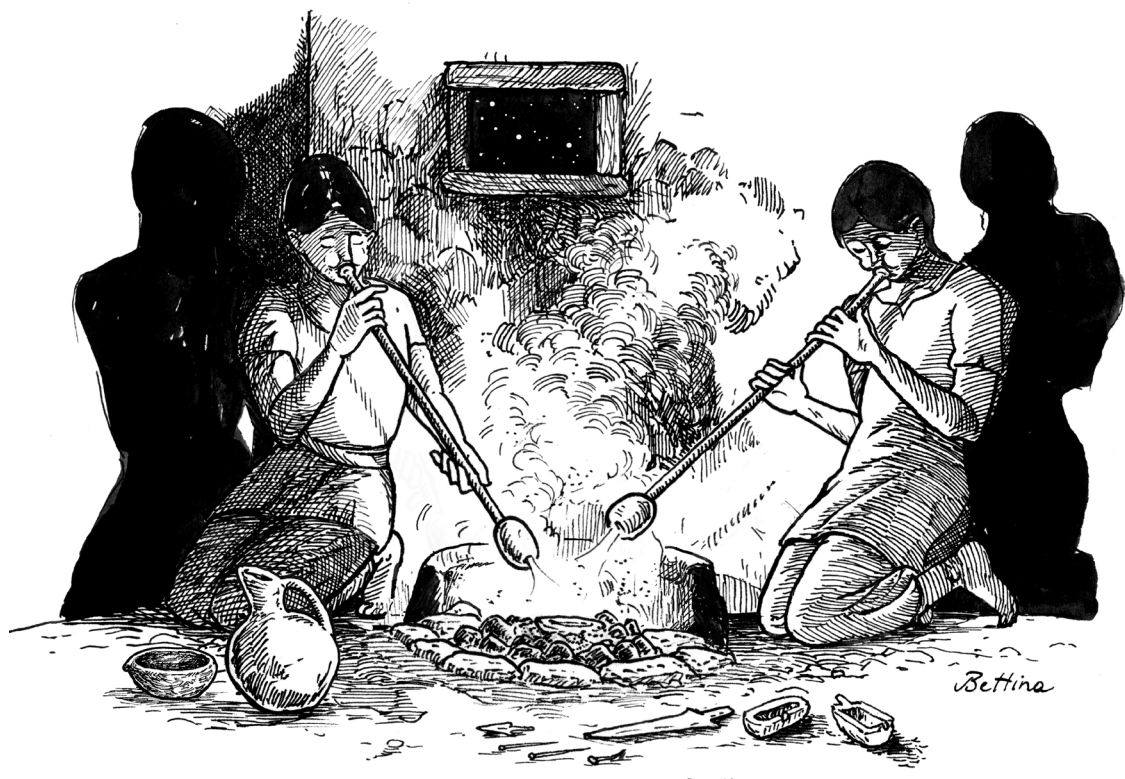
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ISBN: 978-3-7001-8733-2
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Printing: Prime Rate, Budapest

<https://epub.oeaw.ac.at/8733-2>

<https://verlag.oeaw.ac.at>

Made in Europe



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Preface by the Series Editor

The 25th volume of the OREA series by Sabina Cveček is dedicated to the sites Çukuriçi Höyük (Turkey) and Platia Magoula Zarkou (Greece) and their interdisciplinary socio-cultural contextualization in the Aegean world of the 3rd millennium BCE. Both sites constitute a crucial part in the research focus of our department, concentrated in the *Prehistoric Phenomena* research group managed by the series editor. The integration of the western and eastern coasts of the Aegean Sea into a socio-cultural approach and its additional much broader contextualization within southeast Europe, prehistoric Anatolia and western Asia forms a methodological and theoretical fundament of our group's research.

Initiating an interdisciplinary team of PhD students within the funded DOC-team program of the Austrian Academy of Sciences in 2015 not only supported our main aims but also offered new perspectives. The expertise and theoretical background in modern socio-cultural anthropology offers a wider and partially different perception for the understanding and modelling of our archaeological and scientific data beyond the traditional ethnoarchaeological approach. Sabina Cveček and her PhD student-collaborators managed a team-based and in-depth study with a focus on the role of households very successfully and with solid results.

The present book demonstrates the successful outcome of Sabina Cveček's thesis in integrating the two prehistoric sites to shed new light on the social organization in the Early Bronze Age Aegean and western Anatolia. The role of households, modes of production and types of economies, craft specialization, types of exchange systems and further aspects are systematically analysed within the context of non-state social organization. She suggests a 'great man model' for the EBA Çukuriçi communities different than the assumed 'big man model' for the Platia Magoula Zarkou inhabitants. Overall, she argues convincingly for a more complex socio-political organization model in the Aegean Early Bronze Age, including multiple types existing contemporaneously in the 3rd millennium BCE. Her results are based on the huge datasets and archaeological studies of both sites, also available for the interested reader.

The Platia Magoula Zarkou project by Eva Alram-Stern successfully accomplished the publication of the previously excavated stratigraphies and selected materials as the 23rd OREA volume, which provides the important data and their contextualization for some aspects discussed in the present study. The primary data, materials and related analyses of the second prehistoric site in focus are continuously published in the Çukuriçi Höyük series, of which the present open access monograph on *Household Economies in the Early Bronze Age Aegean* by Sabina Cveček represents its 4th volume. Her studies are part of our long-term investigations on the prehistory of the Ephesos region and the central Aegean coast of western Anatolia with a focus on the results of our excavations at Çukuriçi Höyük conducted between 2007 and 2014. The already published Çukuriçi volumes on the introductory framework of chronology, stratigraphy and contexts (OREA 5), on the Late Chalcolithic settlements and materials (OREA 7) and on the Early Bronze Age metallurgy (OREA 22) form the backbone to the present volume, together with the currently c. 90 papers on various topics and scientific analyses related to the Çukuriçi remains available via the open access and online repository of the Austrian Academy of Sciences Press (<https://epub.oeaw.ac.at/ERC-Prehistoric-anatolia>). Additional volumes on the Early Bronze Age architecture and stratigraphy as well as on textile production have been completed and will come out soon, some parts of them having already been available to the author at the time of writing.

My sincere thanks go to the Austrian Academy of Sciences for the funding of the DOC team project and the PostDoc-Track fellowship for the author. Financial support for the book has been provided by the Holzhausen Legat and the Open Access Fund of the ÖAW as well as the University of Vienna. I warmly thank our well-practised publication team with Ulrike Schuh responsible for the editorial management and Nicola Wood for English corrections. The graphics and layout were prepared by Daniela Seiler. Special thanks go to the Austrian Academy of Sciences Press for their ongoing support of the OREA series.

Barbara Horejs
Scientific director of the Austrian Archaeological Institute
Vienna, 1 July 2022

Acknowledgements

The following study is the outcome of my PhD thesis, which I worked towards and wrote at the University of Vienna's Department for Social and Cultural Anthropology and the former Institute for Oriental and European Archaeology (OREA), now part of the Austrian Archaeological Institute (OeAI), at the Austrian Academy of Sciences in Vienna.¹ I obtained my doctoral degree in February 2021, under the supervision of o. Univ.-Prof. i.R. Dr. Andre Gingrich, with a doctoral thesis entitled 'Households at the Dawn of the Bronze Age: Anthropological Contextualizations of Local Social Organization Within the Aegean Basin'. For my thesis I received a sowi:doc 2021 Award from the University of Vienna's Faculty of Social Sciences, an achievement that could not have been reached without the support of a few key individuals and institutions to whom I am indebted.

During this study, I was involved in an interdisciplinary DOC-team project, which included two prehistoric archaeologists (Maria Röcklinger and Constanze Moser), a zooarchaeologist (Stephanie Emra), and me, a trained socio-cultural anthropologist. I remain deeply indebted to my DOC-team colleagues as well as to all our DOC-team supervisors: o. Univ.-Prof. i.R. Dr. Andre Gingrich, Prof. Dr. Barbara Horejs, Doz. Dr. Eva Alram-Stern, Priv.-Doz. Mag. Dr. Alfred Galik, and ao. Univ.-Prof. Dr. Gerhard Forstenpointner. I am grateful for the myriad curiosity and generosity of these crucial collaborators whose expertise has significantly enriched this manuscript and furthered my specialization in contextualizing prehistoric data through the approaches of socio-cultural anthropology with a focus on non-state, more or less sedentary societies.

In no way was my specialization a matter of course at the beginning of this undertaking. In 2012, during my undergraduate studies in Ethnology and Cultural Anthropology at the University of Ljubljana, I assisted a prehistoric archaeologist, Dr. Agni Prijatelj (at the time a PhD candidate at Durham University), in conducting ethnographic interviews about human use of caves and rock shelters in the Kras region of Slovenia. Although I could not have predicted how that experience would have an impact on me, I am appreciative that working with her gave me an initial glimpse into how anthropologists and archaeologists can collaborate. In 2015, I, for the first time, engaged with my interdisciplinary DOC-team not as an ethnographer or interview assistant but as an anthropology postgraduate student interested in prehistoric archaeological material. Although I missed the excavations at both Platia Magoula Zarkou and Çukuriçi Höyük, I closely studied the research reports and analysis of my DOC-team colleagues and other specialists.

Conducting research influenced by contemporary methods in historical and comparative anthropology required the support of several important research groups and individuals. First and foremost, I remain deeply grateful for the support of my adviser, o. Univ.-Prof. i.R. Dr. Andre Gingrich (Institute for Social Anthropology, Austrian Academy of Sciences) who contributed greatly to this endeavour, not least because of his fondness for interdisciplinary collaboration. More often than not, his timely and valuable advice pulled me out of vicious circles of trying to solve the archaeological puzzles that could not always be solved. Andre has

¹ In 2021, OREA has been incorporated into the newly formed Austrian Archaeological Institute (OeAI) of the Austrian Academy of Sciences as the Department of Prehistory & West Asian/Northeast African Archaeology.

also gone the extra mile with me in offering continued support during revision and editing of this manuscript.

Second, I would particularly like to thank two senior scientists and experts in the prehistory of the Aegean basin at OREA, namely Prof. Dr. Barbara Horejs and Doz. Dr. Eva Alram-Stern. They generously offered to share with me unpublished material from both sites of inquiry, which I could utilise for further anthropological contextualization. They also carefully read and commented on the earlier versions of this manuscript. Our DOC-team was also fortunate to benefit from the Prehistoric Phenomena research group led by Prof. Dr. Barbara Horejs.

I would also like to thank the two anonymous reviewers whose reports have greatly improved this manuscript. One of them, Prof. Timothy Earle (*Professor Emeritus*), has personally asked the publishing house to reveal his name to me, for which I am profoundly grateful. Prof. Timothy Earle has indeed gone above and beyond in his role as this manuscript's reviewer. By having a second look at my now revised manuscript, he has displayed a true dedication to supporting archaeological anthropology. Thanks to Prof. Earle's efforts, this particular research record has well survived its contexts which emerged in 1970s Michigan. It will live on beyond inspirations by Marshall Sahlins, Prof. Earle's original PhD adviser, who has meanwhile, unfortunately, passed away. Certainly, Sahlins's *Stone Age Economics* and Earle's *Bronze Age Economics* were an important inspiration for *Household Economics* to see the light of the day.

This study benefitted from my archaeological fieldwork at the Ephesus Excavation House of the Austrian Archaeological Institute (OeAI) in Selçuk (Turkey), for which I would like to thank Priv.-Doz. Dr. Sabine Ladstätter. In 2019, I was privileged to conduct a six-month visiting research fellowship at the Max Planck Institute for Social Anthropology (MPI) in Halle/Saale (Germany) within the ANARCHIE (Anthropology, Archaeology, and History) PhD school. I would especially like to thank the co-director of the MPI at the time, Prof. Dr. Chris Hann, who was the leader of the Resilience and Transformation in Eurasia research group, for enabling me to present my work in a richly interdisciplinary setting. I was also fortunate to attend the PhD colloquium in prehistoric archaeology, led by Prof. Dr. François Bertemes at the Martin Luther University of Halle-Wittenberg. For meaningful debates conducted in Halle/Saale I thank Juana María del Carmen Carabaño Ponte, Ceren Deniz, Ivan Rajković, Franziska Knoll, Nikolas Olma, Ian Walker, Lale Yalçın-Heckmann, and Patrick Heady.

I would also like to thank the University of Vienna's Social and Cultural Anthropology department's PhD 'support group' in general, as well as Cansu Civelek, Melanie Sindelar, Rodrigo Ruiz, Suzana Jovicić, Sinara Navoyan, Volha Biziukova, Gerti Saxinger, Nina Haberland, and Eline Castelijns in particular, for your companionship on this journey. The same goes for my colleagues at OREA (now OeAI), Estella Weiss-Krejci, Reinhard Jung, Christoph Schwall, Bogdana Milić, Clare Burke, Dominik Bochatz, Sebastian Becker, Maxime Bami, David Blattner, Michael Brandl, Laura Burkhardt, Felix Ostmann, Dagmar Melman, and Ulrike Schuh, who accompanied me and supported me over the past years while sharing their expertise with me. A significant portion of the manuscript revisions was completed while I was an IFK_Junior Fellow (2020/2021) in Vienna. During the pandemic-stricken IFK semester, Julia Boog and the "early birds" – Nora Grundtner, Sabrina Grohsebner, and Alexander Draxl – ensured that the IFK Monday lectures will remain memorable beyond the scope of the pandemic. Thanks to graphic novelist and IFK 2020/21 Research Fellow Bettina Egger, this manuscript is richer for her idiosyncratic depiction of metalworking at the dawn of the Bronze Age at Çukuriçi Höyük.

This book would not have been possible without the DOC-team grant (70291) and the Post-DocTrack Fellowship from the Austrian Academy of Sciences (85076), the Marietta Blau grant from the Austrian Federal Ministry of Education, Science and Research (BMBWF), the Lukas Knäffel'sche Privatstiftung and the Tumova Fellowship from the University of Ljubljana, as well as the IFK_Junior Fellowship. Thanks to the invitation from Prof. Dr. Barbara Horejs, my manuscript has appeared within the OREA's Çukuriçi Höyük book series. For covering the expenses for print, I am grateful for funding received from Austrian Academy of Sciences'

Holzhausen-Legat and the Open Access Fund as well as the University of Vienna's Department for Social and Cultural Anthropology.

I remain thankful to Eric Moses and Sinead O'Sullivan for language-related assistance with earlier versions of this text. During the final steps of preparing this manuscript for publication, I also received important assistance from Ulrike Schuh, publication coordinator of the OREA volumes, and Nicola Wood, the language editor. Throughout this process, I also received unwavering support from Aneeq Mahmood – inside and outside our home – and from my (grand) parents and brother to whom I am particularly thankful.

Vienna, December 2021

I. Introduction

‘Some of the most interesting questions we can ask about early societies are social. They are about people and relations between people, about the exercise of power and about the nature and scale of organization.’

Colin Renfrew and Paul Bahn²

As a topic of inquiry, the Bronze Age, foreign as it may sound to contemporary socio-cultural anthropologists, represents a long and fruitful research trajectory within this discipline. In particular, Jack Goody’s contributions to prehistoric research serve as a useful illustration of fairly recent anthropological contributions to an understanding of the Bronze Age relevant to the basic concerns of archaeologists dealing with the emergence of stratified societies. After all, contemporary individuals and populations still benefit from or protest against the major, seemingly irreversible, cultural changes that swept across Bronze Age societies in both the East and the West. Bronze Age inventions like the plough, the wheel, and writing not only transformed agricultural and craft production but also reshaped family structures and landholding systems across Eurasia.³ The shift from kin-based, non-literate farming village societies to politically and economically centralized urban and scriptural societies was accompanied by a process of urban revolution.⁴ According to Goody, these overlapping processes divided the Old World in two: a markedly socially stratified Eurasia based on plough agriculture; and a less socially stratified Africa, which made use of the digging stick for cultivation.⁵ The foundation of what later led to the emergence of ‘Eurasian civilization’ was laid around 3000 BC, when the Mesopotamian and Egyptian ‘culture of cities’ spread westwards to Greece,⁶ while to the east their counterparts emerged in China. Goody’s writing, which was largely inspired by Gordon Childe, has shown that the seeds of the social inequality that Karl Marx and Max Weber associated with the impact of the Industrial Revolution had already begun to sprout in the Bronze Age.

Goody’s model of social stratification, based on the transformation of agriculture, urbanization, and several pivotal inventions, still holds merit – however, the process of ‘Eurasianization’ does not appear to be as straightforward and homogeneous as he had envisioned. Today, it is well known that there were significant time lags associated with the introduction of agriculture to different areas of Eurasia,⁷ and the same can be said for literacy, the emergence of other full-time specialists, and of socio-political centralization. Recent archaeological discoveries of urban mega-sites in the Dniester region even point towards a markedly different possibility – a more ‘egalitarian’ integration on an urban scale. The mega-sites from Dniester,⁸ but also other ‘deviant’ cases of non-centralized urban societies outside Eurasia,⁹ call into question the long-standing positive correlation between population density and the emergence of

² Renfrew – Bahn 2016, 179.

³ Goody 1976; Goody 1990.

⁴ Childe 1950.

⁵ Goody 1976; Goody 1990; Goody 2010.

⁶ Goody 2010, 1.

⁷ Halstead 1995.

⁸ Wengrow 2015.

⁹ Jennings – Earle 2014.

centralized political structures.¹⁰ On the same note, Neolithic excavations have also provided evidence indicating that largely ‘egalitarian’ urban sites (e.g. Çatalhöyük) may have predated Bronze Age centralized urban sites.

However, Goody was correct in dating the first cities and states with a centralized socio-political organization to the beginning of the 3rd millennium BC. In contrast to the Egyptian civilization that emerged along the Nile, the Mesopotamian civilization between the Euphrates and Tigris and the Indus Valley civilization along the Indus River, societies outside these three core spheres of civilization maintained significantly different modes of life. At the beginning of the 3rd millennium BC, small farming villages prevailed across Europe, western, southern, and southeastern Asia, and North Africa. On the Early Bronze Age Arabian Peninsula and in North Africa, pastoralism was of slightly more importance than farming. The southeastern circum-Mediterranean was embedded in this wider heterogeneity at the peripheries of the ancient civilizations of Mesopotamia and Egypt. In contrast to this, mobile hunter-gatherer communities continued to inhabit large parts of central and northern Asia, Scandinavia, and sub-Saharan Africa. This albeit rather simplified bird’s-eye view of the Old World nevertheless shows that nothing resembling a coherent ‘Eurasian civilization’ existed across Eurasia at the turn of the 3rd millennium BC. Developments within the Aegean basin¹¹ at the dawn of the Bronze Age were thus characterized by smaller, but not fewer, novel societies than those at the civilizational core.¹² These societies have already been identified as ‘the best in which to explore how Mediterranean societies could transform themselves bottom-up, largely or wholly without eastern input’.¹³

Transformations at the ‘periphery’ or margins of civilization,¹⁴ namely in the Aegean basin, at the dawn of the Early Bronze Age (EBA) lay squarely within my research interests. From the outset, this research has questioned what kind of socio-economic and political organization these local and regional societies within the Aegean basin may have maintained in the absence of urban centres, writing, and a centralized administration at the dawn of the Early Bronze Age.

This chapter outlines the main issue of study, namely an interdisciplinary examination of households at the dawn of EBA I at Çukuriçi Höyük and Platia Magoula Zarkou, as well as Late Neolithic households at the latter site. The aim of this study was not to study households at each site independently, but to elucidate local social organization from a bottom-up perspective. In Chapter I, this book outlines the research problem and describes the interdisciplinary method of household archaeology used to tackle the issue in question. It also provides a bird’s-eye view of Early Bronze Age developments in the Aegean by addressing differences and similarities between archaeological finds at the two sites respectively. The major appeal of this chapter is to socio-cultural anthropologists, inviting them to include both historical and archaeological material sources as a pool of data necessary for addressing non-state sedentary or non-sedentary societies. Although Jack Goody, Tim Ingold and, more recently, David Graeber, together with a few other socio-cultural anthropologists, have aimed at addressing archaeological contexts, apart from an indirect collaboration with archaeologists, most socio-cultural anthropologists avoid taking archaeological data as their primary pool of evidence. By contrast, this study prioritizes archaeological data whilst taking ethnographic examples and anthropological theories as the main means to address and interpret prehistoric households and local social organization. Household archaeology can facilitate the evaluation of prehistoric

¹⁰ Wengrow 2015.

¹¹ The Aegean basin refers to the geographical region between the Greek and Anatolian peninsulas, including the Aegean Sea coast, the Cycladic Islands, and the associated hinterlands.

¹² Broodbank 2013.

¹³ Broodbank 2013, 304.

¹⁴ Sherratt 1993.

local forms of social organization, including households and villages,¹⁵ in close conjunction with socio-cultural anthropological theories and concepts.

1.1. Transformations at the Dawn of the Bronze Age?

Rarely would an archaeologist or an anthropologist claim that a particular period that she or he specializes in was a monotonous time span characterized by no transformations at all. More often than not, it is the opposite. In scholarly literature, a particular period or region commonly brings along crucial transformations, at times even irreversible cultural developments, and new technologies. In the case of the Early Bronze Age Aegean, the state of affairs in this regard is more or less similar to the general picture. As this section will show from a bird's-eye perspective, the newly emerging trading networks such as the Great Caravan Route and the Anatolian Trade Network linked western Anatolia with the Near Eastern early state societies during EBA 2. The emerging cattle culture included traction of vehicles and ploughing. This transformed societies in western Anatolia during the period in question. These transformations also influenced the emergence of new socio-political systems, of which scholars claim that chiefdoms were predominant. But whereas all these changes are commonly inferred from the EBA 2 sites in the region, the EBA 1 sites and their cultural and socio-political developments remain understudied. The section below therefore paves the way towards an understanding of wider regional developments, before presenting each of the two case studies that lead to a uniform chiefdom paradigm being challenged.

The Bronze Age is an archaeological era that spanned from approximately 3300 BC to 1200 BC in the Near East. This time frame is commonly divided into the Early, Middle, and Late Bronze Ages. In the Aegean basin, the Late Chalcolithic or the Copper Age (4250–3000 BC) preceded the Early Bronze Age (3000–2000 BC), and the Late Bronze Age succeeded the Middle Bronze Age (2000–1500 BC). The 3rd millennium BC, the time span of the Early Bronze Age or the so-called Early Helladic (EH) period (3000–2000 BC), is further divided into three subperiods: EBA 1/EH I (3000–2700 BC), EBA 2/EH II (2700–2200 BC), and EBA 3/EH III (2200–2000 BC) (see Fig. 1).¹⁶ These subperiods are based on archaeological evidence of ‘social change’, including changes in pottery and settlement patterns which are visible archaeologically, and had been agreed before the development of radiocarbon dating.¹⁷ In western Anatolia, the sequence of EBA 1, 2, 3 has been inferred from Troy, which remains the best-studied site in the region (see Fig. 2).

It would be fair to expect bronze tools and weapons to predominate in the archaeological record of the Bronze Age. This is, however, not the case for its earliest phase, (EBA 1 (3000–2700 BC), hereafter also referred to as ‘the dawn of the Bronze Age’) in the Aegean basin. Although the earliest bronze tools indeed date to this period, it is copper rather than bronze tools that prevail among EBA 1 (3000–2700 BC) metal finds.¹⁸ The smelting of copper, which originated in the Balkans, the Taurus and the Zagros Mountains, the Caucasus, and

¹⁵ Wengrow – Graeber 2018, 238.

¹⁶ Efe – Türkteki 2011; Blum 2016, fig. 9; Atram-Stern – Horejs 2018, fig. 2.

¹⁷ Radiocarbon dating ‘is the single most useful method of dating for the archaeologist’ (Renfrew – Bahn 2016, 146). It relies on the ratio of radiocarbon (Carbon-14), which is ‘produced in the atmosphere and absorbed by plants through carbon dioxide, and by animals through feeding off plants or other animals. Uptake of ¹⁴C ceases when the plant or animal dies’ (Renfrew – Bahn 2016, 147). After the death of the animal, ‘the amount of ¹⁴C decays at a known rate (50 percent after 5730 years, etc.)’ (Renfrew – Bahn 2016, 147), which allows archaeologists to date precisely archaeological layers that have been excavated.

¹⁸ Horejs – Mehofer 2015.

Mainland Greece	Troad	Inland north-western Anatolia (Phrygian cultural region)			Middle Inland western Anatolian cultural region			Lake district (Lycia-Pisidian cultural region)			
	Troy	Demircihöyük	Küllüoba	Keçiçayırı	Beycesultan	Afyon	Kusura	Harmanören cemetery	Karataş-Semayük		
MH I	V		II A		VII-VI		•			Early MBA	2000 BC
EH III	IV		II B-C		XI-VIII					Early EBA III	2200 BC
EH II/EH III	III		II D-E								2350 BC
EH II	II d-f		III A		XII	Kaklık EBA III graves		A few graves	VI:2	Early EBA III	2350 BC
	II c		III B		hiatus?				VI:1		
	II b		III C								
	II a		IV A		XIII a	Karaoğlu EBA II	Kusura B		V:3	EBA II	2500 BC
		O-P	IV B		XIII c-b				V:2		
	I g h i	N-M	IV C		XIV				V:1		
	I f	K-L	IV D								
	I e	I	IV E		XV						
	I d	H	IV F		XVI				IV		
EH I	I c	G	2		XVII		Kusura A		III	EBA I	3000 BC
	I b	F									
	I a	E			XVIII				II		
	I a	D			XIX						
FN	Kumtepe IB		3						I	Transition period into the EBA	3000 BC
			4			Kaklık Mevkii					
			5								

Fig. 1 Relative and absolute chronology between key Anatolian EBA sites (Blum 2016, fig. 9)

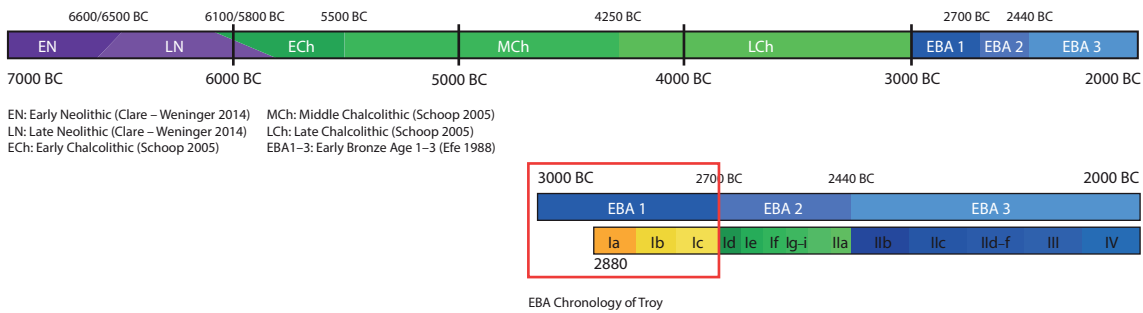


Fig. 2 Chronology from the Neolithic to the end of the Early Bronze Age in western Anatolia, with an emphasis on the EBA 1 period (ERC Prehistoric Anatolia/OeAI, M. Röcklinger)

Arabah Valley during the 5th millennium BC and later spread to the Aegean Basin,¹⁹ brought novelties with it, but also demands that had not previously existed among Aegean societies. Copper, as a requirement for the production of metal tools, needed to be extracted from local shallow copper mines, which were abundant in western Anatolia. Therefore, the earliest Late Chalcolithic copper smelters did not need to rely on any long-distance exchange networks for their copper supplies. By contrast, during EBA 1, smiths in western Anatolia became skilled in the production of tin bronzes, which are more durable than pure copper or arsenical

¹⁹ Radivojević et al. 2018.

copper tools. Since tin is not found as a natural resource in the Aegean basin, production of tin bronzes necessarily relied on long-distance, maritime trade networks during EBA 1 and subsequent periods.

With the introduction of caravans and the exploitation of cattle²⁰ for pulling these vehicles²¹ to Anatolia in EBA 2 (2700–2200 BC), these primarily maritime-based EBA 1 trade networks shifted towards extensive land-based networks during EBA 2, known as the Great Caravan Route and the Anatolian Trade Network.²² The shift in trading strategies introduced novelties across Anatolia and mainland Greece during EBA 2: new pottery shapes, architectural plans, the expansion of cities, a division of labour, etc., undoubtedly reflect some of the changes associated with a two-tiered social organization,²³ commonly referred to as a chiefdom.²⁴ There is little disagreement about the integration of units beyond single sites in EBA 2, and scholars generally agree that chiefdom social organizations were the most common socio-political units in the EBA 2 Aegean basin.²⁵ However, more often than not, scholars project a stratified social organization onto earlier EBA 1 societies,²⁶ as EBA 1 sites are commonly buried underneath EBA 2 archaeological layers. Therefore, the EBA 1 sites are not excavated in as great a number or as thoroughly studied as EBA 2 sites within the Aegean basin. The research bias towards the EBA 2 period, the data for which demonstrates social hierarchy on a local but also a regional scale, has resulted in a limited understanding of EBA 1 social organization within this area.²⁷ Therefore, the research on EBA 1 requires examination without a pre-existing evolutionary agenda, as ‘it is only through a *system’s history* that one can determine the specific role and relative importance of each social structure and each level of this system in the maintenance of its unity and stability.’²⁸ The existing research gap invites inquiry into whether EBA 1 societies were organized into more or less autonomous villages or tribal units,²⁹ or whether a multi-polity social organization, under a supreme chief, is evident from

²⁰ The earliest evidence for donkeys in western Anatolia dates only to the Middle Bronze Age, although donkeys were already used as pack animals in the late 4th millennium BC in the Near East (Arbuckle – McCarty 2014).

²¹ Arbuckle – McCarty 2014.

²² Şahoğlu 2005; Efe 2007.

²³ Two-tiered social organization here indicates an internal social division between the chiefly elite and the commoners.

²⁴ Kouka 2002; Şahoğlu 2005. In socio-cultural anthropology, chiefdom social organization commonly refers to a socio-political polity that unites a few villages under the power of a supreme chief (Service 1962; Sahlins 1968; Carneiro 1981; Skalník 2018). The presence of EBA 2 chiefdoms in the Aegean basin has commonly been inferred from: 1) the existence of a special building within a settlement, pointing towards a centralized settlement and political organization (Şahoğlu 2005; Kouka 2016a); 2) a settlement hierarchy, a redistributive economy, and differences in grave goods (Renfrew 1972; Eslick 2009); and 3) the possession of prestigious objects (Şahoğlu 2005).

²⁵ Renfrew 1972; Kouka 2002; Şahoğlu 2005; Pullen 2011a.

²⁶ Peperaki 2007.

²⁷ Peperaki 2007.

²⁸ Godelier 1986b, 191, italics mine.

²⁹ With the term ‘tribe’ I refer to a type of society and not a stage of social evolution (Godelier 1977). A type of society, in turn, is understood ‘as a family of sociopolitical forms’ (Rosen 2016, 3) in which several forms, ranging from acephalous tribes to centralized chiefdoms, are understood as models of non-state, tribal social organization (Godelier 1977; Gingrich 2015b). The tribe as an anthropological concept referring to such societies, ‘belongs to the conceptual heritage of social anthropology’ (Cheikh 2018, 6203), which ‘may continue to serve as a scientific concept for certain descriptive purposes if liberated from its ideological connotations’ (Gingrich 2015b, 645) (see Chapter II). For the colonial (and post-colonial) invention, abuse and misuse of the term ‘tribe’, see Gingrich 2015b; Sneath 2007; Sneath 2016; Blumi 2010. For a more contemporary mobilization of nation-states against tribes, by depicting them as backward, violent, and non-modern, see Rosen 2016. Although the term tribe has largely been replaced by other concepts such as ‘ethnic groups’ (Barth 1969) or ‘indigenous people’, the latter two concepts refer to much larger groups of people than ‘tribe’ within socio-cultural anthropology (Gingrich 2015b). For a detailed presentist overview of tribes as a fuzzy category within socio-cultural anthropology and prehistoric archaeology, see Chapter II.

the archaeological data. These questions will be addressed in more detail after outlining why Çukuriçi Höyük and Platia Magoula Zarkou were chosen as the present inquiry's main sites: this is outlined in the next section.

I.2. Why Çukuriçi Höyük and Platia Magoula Zarkou?

In a broader sense, Çukuriçi Höyük and Platia Magoula Zarkou fall into the category of most suitable sites to study bottom-up developments, without much of an eastern input from Near Eastern early states in the Aegean.³⁰ Apart from their trading connections, this section shows that Çukuriçi Höyük and Platia Magoula Zarkou were largely independent of any other immediate influence of early states by the early or mid-3rd millennium BC. In order to understand better wider regional differences and similarities between the two sites, this section summarizes Çukuriçi Höyük's and Platia Magoula Zarkou's respective geographical location, site size, domestic architecture, subsistence practices, and crafts such as metalworking and pottery production. Based on these insights, certain initial postulations and inferences about their small-scale qualities are possible: an estimate that we are dealing with two sites that might have been limited to up to 500 inhabitants per site, dwelling in houses made of mudbrick walls, using handmade pottery, without accountancy or scriptural records. Such small-scale, non-scriptural societies were commonly a primary target group for ethnographic research in the 20th century and therefore ethnographic evidence gathered by other researchers remains particularly valid for the contextualization of these archaeological case studies.

This study aims to fill the research gap mentioned above through a systematic assessment of EBA 1 archaeological data at two small-scale sites in the Aegean basin – Çukuriçi Höyük in western Anatolia³¹ and Platia Magoula Zarkou in Thessaly³² – from socio-cultural anthropological perspectives (see Fig. 3). The two sites on either shore of the Aegean basin are examples of preliterate, sedentary farming communities without monumental architecture, built on the same mounds and inhabited for centuries. They fall into the group of most suitable sites for studying local developments.³³ This is because, beyond trading connections, they were largely independent of any other immediate influence from early states in the wider region at the beginning of the 3rd millennium BC, and as such, correspond to the aim of this study.

Although, prior to this study, the two sites were thought of as being contemporaneous (dating to the first quarter of the 3rd millennium BC), in the course of this research process it has turned out that this was not the case. Whereas the material record at Çukuriçi Höyük dates to EBA 1 (2950–2750 calBC),³⁴ the prehistoric record at Platia Magoula Zarkou in fact dates to a later period, EBA 2 (around 2500/2400 BC).³⁵ Before engaging with the archaeological team, I would have viewed such a result as disastrous for this research. However, the two bodies of archaeological data, while not strictly contemporaneous, definitely continue to

³⁰ Broodbank 2013.

³¹ Western Anatolia is a geographical region in the western part of what is now Turkey. It refers to the region west of the Taurus and Pontic Mountains, enclosed by the Black Sea to the north, the Aegean Sea to the west, and the Mediterranean Sea to the south. Çukuriçi Höyük is a coastal prehistoric site in the Izmir region, 2km from the ancient town of Ephesus and the contemporary town of Selçuk.

³² Thessaly is a geographical and administrative region in what is now the eastern Greek mainland. The larger part of this geographical unit consists of the Thessalian plain, south of the Olympus range, east and north of the Southern Pindos Mountains, and west of the Aegean Sea. Platia Magoula Zarkou is a prehistoric mound in the western part of the Thessalian plain, 2km south of the present-day village of Zarko and 30km west of Larissa.

³³ Broodbank 2013, 304.

³⁴ Horejs 2017b, fig. 1.5.

³⁵ C. Moser, pers. comm. 2019; Weninger et al. 2022.



Fig. 3 The locations of Platia Magoula Zarkou and Çukuriçi Höyük (ERC Prehistoric Anatolia/OeAI)

provide insight into the two distinct histories on each side of the Aegean basin. In turn, these can be accounted for through differences in local household and settlement organization, including animal breeding strategies, and a differentiated involvement in regional economies. Lastly, from the outset, the two sites being contemporaneous was not the main, and certainly not the only, reason for comparison.

The two sites in question share basic similarities and present key differences, both with respect to each other and also to other sites in the same region. In the following discussion, a brief description of the two sites in terms of their geographical location, domestic architecture and pottery, and subsistence practices (including crafts) is presented. This will provide a general insight into the shared and differentiated characteristics of regional sites during this period, before outlining the research questions, the methodological and theoretical approaches, and the impact of this study.

The Coexistence of Mainly Small-Scale Sites with a Few Regional Centres on Alluvial Plains

Without exception, the EBA 1/2 sites (in western Anatolia and the Thessalian plain) were located on alluvial plains.³⁶ The sites depended on river deltas, valleys, or the Aegean Sea, with limited alluvial plains around the hinterland sites. It seems that during this period, sedentary farming communities preferred to settle close to fresh water sources, which also provided clay for the production of pottery, chert for the knapping of stone tools, and fertile land. Within the alluvial plain basin, dwellers at each site could make use of fertile farming land for the cultivation of domestic crops and the pasture of domestic animals, which were documented equally at each site.³⁷

³⁶ Kouka 2002; Alram-Stern 2004.

³⁷ Becker 1991; Jones – Halstead 1993; Horejs et al. 2011; Galik et al. 2013; Galik 2014; Horejs – Galik 2016.

EBA 1 sites in western Anatolia and EBA 1/2 sites on the Thessalian plain rarely exceeded 2 hectares in size.³⁸ Based on their settlement sizes, the majority of sites were village farming communities with an ‘urban character’,³⁹ reflected in the agglutinated settlement pattern and the presence of enclosure walls. However, in most cases, these village farming communities with an urban character did not exceed 2 hectares or 500 inhabitants.⁴⁰ These small-scale sites (below 2 hectares) coexisted with larger settlements or the so-called ‘regional centres’ such as Liman Tepe (6 hectares) in Izmir and Heraion (3 hectares) on Samos among coastal western Anatolian sites.⁴¹ The overall pattern of keeping the size of sites below 2 hectares appears to be due to well-established social norms, which limited population growth and restricted spatial expansion beyond 2 hectares across local and regional levels, albeit with some exceptions. These village farming communities most likely separated once the local village population had reached a critical carrying capacity.⁴² Fission could lead to the occupation of the same cultural niches – the alluvial plains – that were previously uninhabited, or different ecological niches – the hilly surroundings – for which direct empirical data remains scarce.⁴³ In both cases, the maintenance of socio-economic links between sites, which were necessary for apparently peaceful coexistence, seems to have been the case during EBA 1, for which any archaeological record for organized warfare is largely missing.⁴⁴ These regional links and networks, representing alliances between sites, can best be observed from the exchange of obsidian, metal tools, and (possibly) subsistence and other commodity items.

Tell-Settlements

Most of the EBA 1/2 sites excavated during this period are mound or tell-settlements,⁴⁵ which, in a wider context, over the centuries, became ‘monument[s] of social genealogy and memory’.⁴⁶ Many of the western Anatolian tell-settlements were already inhabited during earlier periods, e.g. during the Neolithic or Chalcolithic periods. Reasons why these sites were reoccupied may be manifold, including their location in fertile environments, which continued into the Bronze Age and well beyond. Other possible reasons could be the development of less labour-intensive new agricultural fields in secondary forests,⁴⁷ and settlements on slightly raised ground as a strategic dwelling point within the wider surrounding plain. However, the lack of excavated seasonal or permanent settlements in the hilly areas, away from the alluvial plains, poses a difficulty for understanding other ways of dwelling during this period. These other modes may be either complementary to the permanently occupied sites on the alluvial plains, or represent a contemporaneous but markedly different mode of dwelling within the same region, and the exploitation of different ecological niches.

³⁸ Kouka 2002, fig. 2.

³⁹ Horejs 2014.

⁴⁰ For the correlation between (a densely built) settlement size and population, see Horne 1994, and Chapter IV.

⁴¹ Kouka 2002, fig. 2.

⁴² Cameron 2013.

⁴³ According to Sherratt’s Secondary Products Revolution model, the pastoral – mobile sheep and goat herding – communities must have existed alongside more or less sedentary farming communities since the 4th millennium BC in the Near East and the Aegean basin (Sherratt 1981; Sherratt 1983).

⁴⁴ Erdal – Erdal 2012.

⁴⁵ A ‘tell’ or ‘tel’ (derived from Arabic: تَلّ *tall*, ‘hill’ or ‘mound’) is an archaeological *terminus technicus* that refers to an anthropogenic mound which usually results from continuous occupation over a long period of time – a few centuries or millennia. The term can also be associated with the Akkadian *tillu*, which is closely associated with hill-like mounds, or ruined cities. In Turkish, ‘tell’ is known as ‘höyük’ (e.g. Çukuriçi Höyük) or ‘tepe’ (e.g. Göbekli Tepe), and in Greek as ‘magoula’ (e.g. Platia Magoula Zarkou).

⁴⁶ Earle – Kristiansen 2010, 15.

⁴⁷ Culwick et al. 1935.

(Un)Strategic Locations

On the Thessalian plain, regional EBA 1/2 sites were located either along the major Thessalian river (the Pineios River, connecting the Western Thessalian Plain to the Aegean coast) or the Aegean Sea, providing connectivity with the wider Aegean basin. The two EBA 2 Thessalian hinterland sites, Platia Magoula Zarkou and Argissa, are located close to the Pineios River, whereas Pevkakia was located on the Pagasetic Gulf (see Fig. 24, Chapter V). Among these sites, the strategic location of Pevkakia at the northwestern end of the Aegean Sea, on the Pagasetic Gulf, provided an opportunity for both maritime and land-based connectivity. Within the Thessalian hinterland, Platia Magoula Zarkou was previously categorized as a ‘central location, in close proximity to the Pineios River and at an important crossing point between the eastern and western plains’.⁴⁸ The site of Platia Magoula Zarkou provided a good location for either land-based or river-based exchange, rather than maritime exchange networks. The strategic location of Platia Magoula Zarkou thus makes it comparable to Çukuriçi Höyük.

Çukuriçi Höyük, while also being a coastal site, occupied an ostensibly strategic position at the delta of the Küçük Menderes River, providing connectivity with the western Anatolian hinterland. This river, however, is strategically less important than the Büyük Menderes River a few kilometres to the south, which provides significantly better river connectivity into the western Anatolian hinterland compared to the Küçük Menderes River. Additionally, the location of Çukuriçi Höyük enabled the dwellers there to utilize local deposits of lead, silver, and copper ores⁴⁹ to their own advantage, which allowed them to participate in maritime and land-based exchange. However, the hinterland western Anatolian sites also demonstrated involvement in land-based and river-based exchange networks, reflected in their access to both Melian and central Anatolian obsidian.⁵⁰ The EBA 1 river connectivity and land-based trade facilitated the continuity in trading activities in Melian obsidian into the Anatolian hinterland that emerged during the Late Chalcolithic.⁵¹ Hinterland western Anatolian sites such as Aphrodisias⁵² maintained stronger links to the central Anatolian sources compared to Çukuriçi Höyük, if analysed based on their access to obsidian resources.

Settlement Architecture

Within western Anatolia, there is a strong architectural similarity in settlement patterns between the eastern Aegean islands (Poliochni, Thermi, Emporio) and the coastal western Anatolian sites (Liman Tepe, Bakla Tepe, Troy, Çukuriçi Höyük) during the EBA 1/2 period. A clear transition in domestic architecture is evident between the Late Chalcolithic and the EBA for the settlements in the coastal region.⁵³ In contrast to the preceding Late Chalcolithic period (when domestic structures comprised free-standing rectangular, apsidal and round structures), exclusively rectangular structures in an agglutinative pattern are detected during the EBA 1/2 period.⁵⁴ A two-room ‘longhouse’ became the norm in most of the coastal western Anatolian settlements, which were organized in insulae.⁵⁵ In the hinterlands of western Anatolia, the architectural plans of sites differed significantly from those detected among the coastal sites. In the hinterland, sites such as Demircihöyük⁵⁶ and Küllüoba⁵⁷ comprised two- or three-roomed

⁴⁸ Pentedeka 2011, 14.

⁴⁹ Horejs – Mehofer 2015, 172.

⁵⁰ Leurquin 1986.

⁵¹ Leurquin 1986; Sharp Joukowsky 1986.

⁵² Leurquin 1986; Sharp Joukowsky 1986.

⁵³ Schwall – Horejs 2015.

⁵⁴ Schwall – Horejs 2015; Fidan et al. 2015.

⁵⁵ Kouka 2002.

⁵⁶ Durgun 2012.

⁵⁷ Efe 2003; Fidan et al. 2015.

structures, arranged in a radial pattern around a central courtyard area. The latter architectural pattern was not documented on the coast, where streets without central open areas divided sites into what I describe as ‘*mahalle*’ in Chapter IV.

A different pattern can be observed at the hinterland site of Karataş⁵⁸ during EBA 1, in contrast to these two typical patterns – the row houses⁵⁹ at the coast and the radiating settlement pattern around a central courtyard in the hinterland.⁶⁰ At Karataş, and so far without a contemporary and regional analogy, not only an on-mound but also an off-mound settlement has been attested for the earliest phase of EBA 1.⁶¹ Here, one-storey, two-roomed, rectangular free-standing structures (length: 8m, width: 3m) organized in a concentric manner were built off-mound, attached to the outer enclosure of the site.⁶² These houses constituted an artificially built ‘fence’ in a shape of a ring that faced the cobbled path, which encircled the mound’s centre. The path had a gap in the south, to allow access to the central area. At the centre, on top of a mound, was a much larger (length: 10.75m, width: 7.2m), two-storey rectangular house surrounded by a 3m-wide courtyard and a strong fortification wall. This two-tiered settlement organization, with a fortified central structure and smaller houses encircling the mound, remained constant throughout EBA 1 at Karataş.⁶³

In contrast to the solely rectangular structures in EBA 1/2 western Anatolia, dwellers in EBA 2 Thessaly continued to build apsidal and rectangular free-standing (not agglutinative) structures,⁶⁴ which were common during the Late Chalcolithic period in western Anatolia.⁶⁵ The evidence from the coastal site of Pevkakia shows that the apsidal structures were split into two or more rooms by partition walls, and were associated with domestic activities such as food preparation and consumption, spinning, and leatherworking.⁶⁶ At EBA 2 Pevkakia and Platia Magoula Zarkou, the evidence shows that houses in different layers were superimposed,⁶⁷ indicating a continuity of the household’s dwellings at the same site over several centuries.

Enclosure Walls

Among coastal western Anatolian sites, there was an important transformation in the arrangement of settlements between the Late Chalcolithic and the EBA 1 period. Whereas the Late Chalcolithic sites commonly lacked enclosure walls, the EBA 1 coastal sites were usually enclosed.⁶⁸ However, an EBA 1 enclosure was not detected at Çukuriçi Höyük, although this site was surrounded by an enclosure wall and a ditch during the earliest phase of the Late Chalcolithic period (3350–3270 calBC).

The re-emergence⁶⁹ of enclosure walls also occurred during the EBA 1 on the Thessalian plain. Whereas a section of the enclosure wall was excavated at Pevkakia⁷⁰ and Argissa,⁷¹ the presence of an enclosure wall was attested for Platia Magoula Zarkou through geophysical

⁵⁸ Eslick 1988; Eslick 2009.

⁵⁹ Ivanova 2013; Ivanova 2016.

⁶⁰ Efe 2003; Durgun 2012; Fidan et al. 2015.

⁶¹ Eslick 1988; Eslick 2009.

⁶² Eslick 1988; Eslick 2009.

⁶³ Eslick 1988; Eslick 2009.

⁶⁴ Christmann 1966.

⁶⁵ Schwall – Horejs 2015.

⁶⁶ Christmann 1966.

⁶⁷ C. Moser, pers. comm. 2019.

⁶⁸ Schwall – Horejs 2015.

⁶⁹ Enclosure walls were common at Thessalian Neolithic sites such as Sesklo and Dimini. In these cases the settlement was limited to the grounds within the enclosure walls (Souvatzi 2014).

⁷⁰ Christmann 1966.

⁷¹ Hanschmann – Milojević 1976.

prospection.⁷² Without the excavation of the enclosure wall at Platia Magoula Zarkou, any secure dating of this enclosure remains enigmatic. Nevertheless, given that the images from geophysical prospection confirm the existence of an off-mound settlement beyond the enclosure walls, it appears more likely that the enclosure wall at Platia Magoula Zarkou dates to the EBA 2 period rather than the Neolithic. During the Neolithic, there is a lack of evidence for domestic structures beyond enclosure walls in Thessaly,⁷³ whereas settlement beyond the enclosure walls was attested during EBA 2 at Pevkakia in Thessaly⁷⁴ and Lerna on the Peloponnesus.⁷⁵

Separate Places for the Living and Dead

With reference to domestic activities and the organization of domestic space, the places of the living and the dead were segregated symbolically and spatially, uniformly in EBA 1 western Anatolia and on the EBA 2 Thessalian plain. People buried their dead outside the tell-settlements, usually undiscovered archaeologically, except at Bakla Tepe,⁷⁶ Demircihöyük,⁷⁷ Yassitepe Höyüğü, and Yortan.⁷⁸ At these burial grounds, adults were usually buried with and children without grave goods, in the same plots, in pithoi or cist burials. The spatially differentiated treatment of living and dead bodies, however, seems not to have applied to infants. Six infant burials in pots, without grave goods, were found in House 102 at Troy I,⁷⁹ one infant burial without grave goods in a clay pot at Çukuriçi Höyük,⁸⁰ and two infant burials in a wall at Beycesultan.⁸¹

This record shows that infants who were not fully incorporated into the community possibly did not have the right to be placed along with other deceased inhabitants in the burial grounds. To this practice Cveček and Schwall refer to as ‘ghost children’ with delayed personhood. The differential treatment of dead infants or children who had not undergone initiation ceremonies has been documented for various non-state societies.⁸² It seems very likely that these norms also existed during EBA 1 in western Anatolia and EBA 2 on the Thessalian plain, as the infants were not commonly buried alongside the initiated or adult members of the community.⁸³

Pottery

Another supra-regional similarity between EBA 1 western Anatolian and the EBA 2 Thessalian sites concerns pottery production. Pots of all kinds, including for food consumption, storage, or preparation, continued to be handmade,⁸⁴ and most pottery finds were produced from local clay sources.⁸⁵ Only during the EBA 2 period was wheel-made pottery introduced into the Aegean basin region from the Levant.⁸⁶ In western Anatolia, the earliest finds of wheel-made

⁷² Alram-Stern et al. 2022.

⁷³ Souvatzi 2014.

⁷⁴ Christmann 1966.

⁷⁵ Pullen 1985.

⁷⁶ Erkanal – Özkan 1999; Erkanal – Şahoğlu 2012; Irvine et al. 2019.

⁷⁷ Wittwer-Backofen 2000; Durgun 2012; Massa 2014.

⁷⁸ Kâmil 1982.

⁷⁹ Blegen et al. 1950.

⁸⁰ Schwall – Horejs 2015.

⁸¹ Lloyd – Mellaart 1962.

⁸² Van Gennep 1960; Hertz 1960.

⁸³ For child-centred, cross-cultural perspectives on differential treatment of children and adults during the Late Chalcolithic and EBA in Anatolia, see Cveček – Schwall 2022.

⁸⁴ Röcklinger 2015.

⁸⁵ Peloschek 2017.

⁸⁶ Türkteki 2014.

pottery date to approximately 2400 BC at Küllüoba⁸⁷ in the hinterland and Troy IIIC,⁸⁸ and approximately 2300 BC on the coast. On the Thessalian plain, the earliest wheel-made Lefkandi I pottery was identified at Pevkakia during the EBA 2 period on the coast, whereas wheel-made ceramics only reached the Thessalian hinterland after this time.⁸⁹ These ‘Anatolianizing’ features identified at Pevkakia II, such as wheel-made depas drinking-cups, trays, and plates, only reached the hinterland Thessalian sites much later.⁹⁰

The introduction of wheel-made pottery to the Aegean basin has generally been associated with the immigration of small groups from western Anatolia to the Aegean mainland⁹¹ or the intensification of long-distance exchange networks between the Aegean basin and the Near East.⁹² As the evidence from EBA 1 Çukuriçi Höyük and EBA 2 Platia Magoula Zarkou predates these ‘great transformations’, ethnographic descriptions of more or less sedentary, non-state societies without wheel-made pottery (using metal tools to some degree) provide a suitable basis for the anthropological contextualization of the two sites under investigation.

Subsistence

With reference to subsistence practices, Çukuriçi Höyük is seemingly an outlier within the broader western Anatolian region. In comparison to other sites, where sheep and cattle gained in importance during EBA 1, at Çukuriçi Höyük goats predominated within the archaeological record, followed by sheep, cattle, and pigs.⁹³ By contrast, the record from Platia Magoula Zarkou and other EBA 1/2 sites located on the Thessalian plain indicates the greater importance of sheep in the broader region throughout the EBA period.⁹⁴ The mortality age of sheep at sites on the Thessalian plain noticeably increased during EBA 2, thereby suggesting what I call the *generalized craft integration* (see Chapter IV) of wool and woollen items at each site. In this case, a role similar to that played by metalworking at Çukuriçi Höyük during the EBA could be ascribed to wool and the production of woollen items at Platia Magoula Zarkou during EBA 2, and the production of grey on grey pottery during the Late Neolithic.⁹⁵ Through the production of these objects, households could participate in on-site competition as well as wide-ranging trade networks for precious goods (in contrast to prestige goods), through which members of each household could establish regional alliances.

In comparison to the intensification of cattle production during EBA 2 in western Anatolia, it appears that sheep breeding was contemporaneous to these processes in the hinterland Thessalian plain. Within Thessaly, differences can even be seen between the coastal and hinterland Thessalian plain sites.⁹⁶ Whereas cattle gained in importance at Pevkakia,⁹⁷ the coastal Thessalian site, sheep remained more prominent in the hinterland sites, such as Platia Magoula Zarkou and Argissa.⁹⁸ In both cases, the increasing importance of mobile wealth may have triggered more intense competition between sites, with different outcomes. In western Anatolia, the greater importance of cattle and metalworking led to the emergence of upper and lower settlements and other common traits that appear to have come from the Near East, alongside

⁸⁷ Türkteki 2014.

⁸⁸ Choleva 2012.

⁸⁹ Christmann 1966; Choleva 2012.

⁹⁰ Alram-Stern 2004.

⁹¹ Renfrew 2011 [1972], 477.

⁹² Şahoğlu 2005; Efe 2007; Şahoğlu 2008; Rahmstorf 2016; Rahmstorf 2018a.

⁹³ Emra et al. 2020.

⁹⁴ Becker 1991.

⁹⁵ Pentedeka 2011; Pentedeka 2017.

⁹⁶ Becker 1991.

⁹⁷ Hinz 1979.

⁹⁸ Becker 1991.

the well-integrated EBA 2 Anatolian Trade Network,⁹⁹ facilitated by caravans pulled by cattle. In the Thessalian hinterland, the intensification of sheep breeding produced a different context, creating more differences between coastal and hinterland Thessalian sites.

Crafts and Metalworking

With reference to crafts and metalworking, copper production gained in importance during the EBA 1/2 period in western Anatolia as well as in Thessaly. Within the latter region, Platia Magoula Zarkou provided only a single copper pearl within the archaeological record.¹⁰⁰ This is not surprising, since the arsenical copper smelting was widely attested in eastern Thessalian coastal sites, located within a radius of 60km, close to four copper mines and major trading routes.¹⁰¹ The Late Neolithic eastern Thessalian site of Mikrothives, which has recently been identified as an important arsenical copper production centre, with multiple daggers, knives, and other arsenical copper tools excavated here, also falls within this radius.¹⁰² Mikrothives was abandoned before the start of the EBA period, around 3000 BC,¹⁰³ and was therefore not contemporaneous with Platia Magoula Zarkou. Whereas continuity in arsenical copper production was documented on the eastern Thessalian plains, at sites such as Dimini and Petromagoula between the Late Neolithic and EBA 1 period,¹⁰⁴ the evidence for metalworking is rather scarce in the Thessalian hinterland, including Platia Magoula Zarkou, during the Late Neolithic and Early Bronze Age.¹⁰⁵

Despite the strong similarity in architecture among the coastal western Anatolian sites, which seemingly belonged to the east Aegean and western Anatolian ‘cultural koine’,¹⁰⁶ there are major differences between sites regarding metalworking. Whereas metalworking was confirmed in multiple rooms at Çukuriçi Höyük,¹⁰⁷ at other coastal sites metalworking was either limited to a particular room¹⁰⁸ or a few rooms,¹⁰⁹ which was the case at Thermi. At eastern Aegean island sites and western Anatolian coastal sites, metalworking was restricted to a particular room within a domestic setting, coinciding with other exotica such as obsidian and foreign pottery shapes.¹¹⁰

Both sites, Platia Magoula Zarkou and Çukuriçi Höyük, are located on anthropogenic mounds, meaning that they were inhabited over centuries and even millennia. Therefore, Çukuriçi Höyük and Platia Magoula Zarkou can be treated as ‘monument[s] of social genealogies and memory’.¹¹¹ They were already settled during the Neolithic by Neolithic farmers: Çukuriçi Höyük during the Early Neolithic, around 6600 calBC,¹¹² and Platia Magoula Zarkou during the Middle Neolithic.¹¹³ Both sites were abandoned following the Late Neolithic period: Platia Magoula Zarkou around 5100 BC¹¹⁴ and Çukuriçi Höyük around 5970 calBC.¹¹⁵

⁹⁹ Sahoğlu 2005.

¹⁰⁰ C. Moser, pers. comm. 2015.

¹⁰¹ McGeehan Liritzis 1990, 231.

¹⁰² Adrymi Sismani 2016.

¹⁰³ Adrymi Sismani 2016.

¹⁰⁴ McGeehan Liritzis 1990, 231.

¹⁰⁵ McGeehan Liritzis 1990, 231.

¹⁰⁶ Kouka 2002; Kouka 2016a.

¹⁰⁷ Horejs 2010; Horejs – Mehofer 2015; Mehofer 2016.

¹⁰⁸ Kouka 2002; Cultraro 2003; Erkanal – Şahoğlu 2016.

¹⁰⁹ Kouka 2002.

¹¹⁰ Kouka 2002.

¹¹¹ Earle – Kristiansen 2010, 15.

¹¹² Horejs 2017b.

¹¹³ Alram-Stern et al. 2022; Weninger et al. 2022.

¹¹⁴ Pentedeka 2011.

¹¹⁵ Horejs 2017b.

Çukuriçi Höyük was resettled during the Late Chalcolithic (3340 calBC) and inhabited until the end of EBA 1 (c. 2750 calBC) whereas Platia Magoula Zarkou was resettled from EBA 2 (2500/2400 BC) until the Middle Bronze Age.¹¹⁶ Obsidian from the Cycladic island of Melos was identified at both sites (albeit in different proportions). Whereas Platia Magoula Zarkou was a hinterland site located in the vast Thessalian plain (approximately 14,000km²), Çukuriçi Höyük was a coastal site, with alluvial plain land limited to 10km².¹¹⁷ While Çukuriçi Höyük was identified as an EBA copper production site,¹¹⁸ only a single pearl of copper was found at Platia Magoula Zarkou.¹¹⁹

This overview of regional similarities, differences, and on-site specificities in this form only presents a bird's-eye view of archaeological prehistoric realities. It is apparent that despite differences, both sites were located on fertile alluvial plains, and had access not only to local but also to foreign stone tools, and thus there is a need for a comparison beyond ecological determinism. Therefore the comparison between Platia Magoula Zarkou and Çukuriçi Höyük calls for a wider contextualization of how these small-scale societies (below 500 persons per site) were organized during the EBA, and an understanding of how insights from socio-cultural anthropology can contribute to the archaeological interpretation.

I.3. From Archaeological Data to Anthropological Contextualization

A socio-cultural anthropologist addressing questions about deep (pre)history today does not constitute any novel approach, first attempt, or unique inquiry. As I will show below, Jack Goody already pioneered the way in which socio-cultural anthropologists can contribute towards interpretations of deep history and *longue durée* processes through statistical (quantitative) and analytical (qualitative) methods. Yet in the present research endeavour, I chose to follow an approach largely differing from Goody's. I reached my conclusions through a qualitative comparative approach for interpreting prehistoric archaeological material rather than searching for cross-cultural or supra-regional generalizations. By taking the archaeological data as a primary source for this study, ethnographic details are not opposed to but aligned with the analysed material evidence stemming from the two sites. This allows for studying local histories at both sites, complementary to the study of *longue durée* processes that are more familiar to both historical anthropologists and archaeologists alike. In this section, I outline how my research was inspired by Goody's work, how my questions are similar to those of Colin Renfrew, but also how my approach differs from theirs when tackling similar questions.

Goody's writing, which laid a new foundation for the socio-anthropological contextualization of Bronze Age societies, was highly influential for this undertaking. Although my own understanding of the Bronze Age refers to Goody's theoretical insights, I nevertheless employ different methods. Goody tested his hypotheses through cross-cultural comparison based on Human Relations Area Files (HRAF) and the Ethnographic Atlas,¹²⁰ two databases that comprise numerous ethnographic and historical accounts. By contrast, archaeological data provides the main source of data for the present study. This allows me to look at the *longue durée* processes – which were important to Goody – not across Eurasia and over millennia, but through changes in the domestic organization of a specific place and time. The *longue durée* processes can therefore be traced along regional histories within the excavation trenches at the two prehistoric sites of Çukuriçi Höyük (western Anatolia) and Platia Magoula Zarkou

¹¹⁶ C. Moser, pers. comm. 2017; Weninger et al. 2022. Platia Magoula Zarkou was continuously inhabited from EBA 2 into the Middle Bronze Age (E. Alram-Stern, pers. comm. 2020).

¹¹⁷ Stock et al. 2015.

¹¹⁸ Horejs et al. 2010; Mehofer 2014; Horejs – Mehofer 2015.

¹¹⁹ C. Moser, pers. comm. 2017.

¹²⁰ Murdock 1967.

(Thessaly), over a maximum of three hundred years (2950–2750 BC at Çukuriçi Höyük and around 2500/2400 BC at Platia Magoula Zarkou). However, the sealed archaeological context of the house floors also provides a window to short-term *événements* (e.g., a burnt house) or medium-term conjunctures (e.g., house construction), which can be studied alongside the *longue durée* processes. Moreover, my perception of the natural environment also diverges from Goody's. Tempted by the generalizations necessary for the development of a cross-cultural urbanization model linked to agriculture and adoption of the plough, Goody downplayed the coexistence of different types of social organization and modes of life across Eurasia. He completely dismissed pastoral nomadism and hunting and gathering as alternative or codependent modes of organization and production to urban ways of life.¹²¹ These different modes of subsistence not only coexisted during the Bronze Age, but, to a much more limited extent, have even survived to this day.

The present study certainly expands beyond standard anthropological expertise in terms of the premises of its anthropological inquiry. At the beginning of this undertaking, I had to come to terms with my research project's inability to observe differences between what people say and what they actually do – which my fieldwork-related training had prepared me for. However, this compromise proved advantageous, since examining the empirical evidence of what people did in order to understand how they organized themselves almost five millennia ago cannot be undertaken with ethnographic methods alone. This study relies on fresh data, analysed archaeologically by my DOC-team colleagues,¹²² but also draws on approaches to analysing social organization in the EBA Aegean that were pioneered by Colin Renfrew (in his own dialogues with socio-cultural anthropology) in the 1970s.

Renfrew¹²³ was the first to propose that the earliest chiefdoms arose in the Aegean during the EBA. He based his work on neo-evolutionist¹²⁴ models of social organization previously developed within socio-cultural anthropology. Renfrew's reading of Marshall Sahlins and Elman Service introduced him to the idea that chiefdoms *should* be based on a redistributive economy and the political integration of multiple villages, which he worked to 'prove' for EBA societies in the Aegean basin. His neo-evolutionary approach, linear as he saw it from the outset, has been contested by other scholars.¹²⁵ More recent data disproves the existence of a redistributive system of staple goods in the northern Aegean basin, crucial for Renfrew's chiefdom model, until the Middle Bronze Age (2000 BC).¹²⁶ Furthermore, a redistributive economy of staple goods does not seem to have played any crucial role in the development of

¹²¹ Hann 2016.

¹²² The DOC-team is a fellowship hosted by the Austrian Academy of Sciences, which supports interdisciplinary cooperation between four young researchers from disciplines in the humanities and social and cultural studies. This study was undertaken as part of the DOC-team research project alongside two prehistoric archaeologists (Maria Röcklinger and Constanze Moser) and a zooarchaeologist (Stephanie Emra). These DOC-team early stage researchers were supervised by Prof. Dr. Barbara Horejs (adviser to Maria Röcklinger), Doz. Dr. Eva Alram-Stern and Prof. Dr. Joseph Maran (advisers to Constanze Moser), Priv. Doz. Alfred Galik, ao. Univ.-Prof. Dr. Gerhard Forstenpointner, and Prof. Dr. Barbara Horejs (advisers to Stephanie Emra) and Univ.-Prof. i.R. Dr. Andre Gingrich (adviser to me, Sabina Cveček).

¹²³ Renfrew 1972.

¹²⁴ Neoevolutionism is a social theory that deals with the social evolution of societies. Within socio-cultural anthropology, neoevolutionism developed in the mid-20th century. This theory, driven by empirical evidence, unlike the social evolution theories of the 19th century, proposed a universal law of social development through four universal stages of increasing social complexity: band – tribe – chiefdom – state. This modelling of social evolution was quickly adopted by archaeologists interested in long-term processes and the social organization of prehistoric societies. This led to the emergence of 'New Archaeology' or the so-called 'Processual Archaeology', aiming at understanding the underlying processes as universal triggers of social change. Today, neoevolutionist studies are a rather marginal body of research within both disciplines. For a detailed and well-informed overview of neoevolutionism, see Hartmann 2005.

¹²⁵ Pullen 1985.

¹²⁶ Halstead 2011.

chiefdoms in all cases. For example, Bronze Age chiefdoms in what is now Denmark developed and collapsed without any such system.¹²⁷ At its core, my own research objective – understanding EBA 1 social organization – does not differ from Renfrew’s, but tackles the old question in a new manner. I address questions of social organization primarily from a bottom-up¹²⁸ research approach, by aiming to understand the local and regional historical processes of household organization and community-building at each of the two sites. I then examine the questions raised by the so-called top-down approach,¹²⁹ by testing the more or less centralized models of sedentary non-state social organization against the outcomes of empirical data analyses. How this research plan fits into the socio-cultural anthropological research agenda will be outlined in the following section.

I.4. Research Problem and Methodology

Were households – as the basic socio-economic units in many sedentary societies – at Çukuriçi Höyük and Platia Magoula Zarkou specialized or non-specialized? Were they seemingly self-sufficient, or complementary to each other? I address these questions through household archaeology since households include three crucial components for understanding social organization: social (as a demographic unit), material (as a dwelling activity area), and behavioural (activities performed by its members).¹³⁰ Based on these components, I ask about the roles of households, or of ‘householding’ in the Early Bronze Age Aegean: were they of the Domestic Mode of Production kind,¹³¹ or were they more specialized units¹³²? And as which among the models of social organization, if any, could the households at Platia Magoula Zarkou and Çukuriçi Höyük be classified? Did these households reside in centralized and ranked socio-political constellations¹³³ or did they belong to more ‘egalitarian’, decentralized, acephalous societies?¹³⁴ These questions will be addressed in this contribution through historical anthropology,¹³⁵ a genre of historical ethnography,¹³⁶ and controlled comparison.¹³⁷

The question of urbanization is often at the heart of Bronze Age investigations in Eurasia.¹³⁸ Indeed, it has been extensively addressed in anthropological inquiries,¹³⁹ but even more so in the archaeological literature.¹⁴⁰ However, my research question does not deal with the shift from kin-based¹⁴¹ to class-based societies. Instead, it examines the extent to which households, as the basic socio-economic units, were (non-)specialized, seemingly self-sufficient, or com-

¹²⁷ Earle 2002.

¹²⁸ The bottom-up approach in socio-cultural anthropology (and also in archaeology) commonly refers to the examination of local, people-centred motivations for a specific organization of their social worlds (Graeber 2001).

¹²⁹ The top-down approach in socio-cultural anthropology prioritizes the examination of a particular social structure or social order against the ethnographic data (Graeber 2001). In this study, the social structure or social order will be examined against the archaeological data.

¹³⁰ Wilk – Rathje 1982, 618.

¹³¹ Sahlins 1972.

¹³² Earle 2002.

¹³³ Being organized in ranked, hereditary leadership with ‘temples’ (Flannery – Marcus 2012).

¹³⁴ Being organized in achievement-based societies with ritual houses (Flannery – Marcus 2012).

¹³⁵ Kalb – Tak 2005a; Kalb – Tak 2005b; Silverman – Gulliver 2005; Gingrich 2008; Gingrich – Knoll 2018.

¹³⁶ Silverman – Gulliver 2005.

¹³⁷ Eggan 1954; Gingrich – Fox 2002; Gingrich 2012a; Gingrich 2020; Candea 2018.

¹³⁸ Childe 1950; Goody 1990.

¹³⁹ Goody 2006; Goody 2010; Goody 2012; Hann 2016.

¹⁴⁰ Childe 1950; Düring 2011; Jennings – Earle 2014; Wengrow 2015; Macheridis 2017.

¹⁴¹ Godelier 2011 questioned whether anything like a kin-based society ever existed. Instead, he argues that any group or society comes into being only through politico-religious relations that may or may not include kinship relations.

plementary to each other. Consequently, it interrogates whether the multi-polity political integration of several residential units would be necessary for their reproduction. These questions will be addressed through household archaeology¹⁴² – a method of studying archaeological material from a bottom-up perspective – and historical anthropology with regard to domestic economies in sedentary non-state societies.¹⁴³

In contrast to the predominantly ‘elite focused’ Bronze Age research, which discusses social inequalities between individuals in burial deposits, this project understands an individual primarily as a member of a household group and, therefore, as a person.¹⁴⁴ Taken as a social unit, households can then be compared to each other within settlements on a local scale, and then between settlements, on a regional scale. The comparison of households within a settlement, rather than the comparison of archaeological ‘culture’ groups or the comparison of whole settlements to each other, was initially proposed through the collaboration of the anthropologist Richard R. Wilk and the archaeologist William L. Rathje.¹⁴⁵

Household Archaeology

Our DOC-team thus follows a definition of households established by Wilk and Rathje, who defined a household as the ‘the most common social component of subsistence, the smallest and most abundant activity group’¹⁴⁶ that can be analytically addressed through archaeological material. Although Wilk and Rathje included mobile hunter-gatherer societies in their conceptualization of this definition, among mobile hunter-gatherer groups (e.g., Kung!, Australian aborigines), it is the camp and not households which are the smallest and most abundant activity groups, whereas households as such can be found among sedentary hunter-fisher-gatherers (e.g., Kwakwaka’wakw,¹⁴⁷ Inuit). This does not mean that more or less mobile hunter-gatherers do not have a home,¹⁴⁸ but rather that they do not have households, since the camp is the principal socio-economic unit among those societies. Therefore, I propose that Wilk and Rathje’s definition should be used carefully for more or less sedentary hunter-gatherer-fisher groups and farming societies, the latter corresponding to the focus of this study, instead of applying their definition as a cross-cultural analytical concept. As I argue here, it is not a useful analytical tool for mobile hunter-gatherer groups. This refined understanding of households, however, is compatible with what Wilk and Rathje¹⁴⁹ have addressed as three main elements of households:

- (1) *social*: the demographic unit, including the number of and relationships between the members
- (2) *material*: the dwelling, activity areas, and possessions
- (3) *behavioural*: the activities it performs.

With reference to prehistoric archaeological data from Çukuriçi Höyük and Platia Magoula Zarkou, the second and third elements can be thoroughly studied through material remains. The necessary material components of a household – dwellings, possessions, and activity areas – have been excavated at both sites. From the available record, it is also possible to infer the core household activities in the behavioural element. However, it remains more challenging

¹⁴² Wilk – Rathje 1982; Souvatzi 2008; Souvatzi 2014; Müller 2015.

¹⁴³ Polanyi 1944; Service 1962; Sahlins 1972; Goody 1976; Yanagisako 1979; Yanagisako – Collier 1990; Carsten – Hugh-Jones 1995; Grinker 1996; Gudeman – Hann 2015; Yanagisako 2015; Carsten 2018.

¹⁴⁴ Dumont 1980, 280–289; Strathern 1987.

¹⁴⁵ Wilk – Rathje 1982.

¹⁴⁶ Wilk – Rathje 1982, 618.

¹⁴⁷ In anthropological literature the Kwakwaka’wakw are more commonly referred to as Kwakiutl.

¹⁴⁸ Maher – Conkey 2019.

¹⁴⁹ Wilk – Rathje 1982, 618.

to understand the social component without recorded data of the average number of members within a household unit and the relationships between these members. To understand the social element of households at Çukuriçi Höyük and Platia Magoula Zarkou, this research relies on ethnoarchaeological insights from northwestern Iran, where similar patterns and sizes of dwellings have been thoroughly studied through mixed methods, including ethnographic and archaeological investigations.¹⁵⁰ Moreover, relations between members within households and between households will be addressed through food sharing and the organization of craft activities.

By looking at households cross-culturally, Wilk and Rathje proposed that ‘the many activities [households] perform can be classified into four categories of function: production, distribution, transmission, and reproduction’,¹⁵¹ which necessarily correspond to the group’s mode of production.¹⁵² Influenced by Goody’s writing, they argued that ‘the whole process of social stratification is linked with the creation of *extreme households*, those of the landless and those of the landed’.¹⁵³ Based on their preliminary analyses of cross-cultural comparative examples, Wilk and Rathje developed some preliminary presuppositions about household organization:

- ‘(1) Under production, it is clear that the need for task simultaneity produces large households.
- (2) Under distribution, the more spatially clustered and the more temporally varied the resources, the larger the households that manage them.
- (3) Households that tie together both production and distribution in pooling are more stable than those that do not.
- (4) Under transmission ... partible inheritance leads to small households as the inheritors go their separate ways. Impartible inheritance tends to create large numbers of small landless households that may then be drawn into association with the few large households of the elite, or into large craft households or other such organizations.’¹⁵⁴

Of particular interest to my study is Wilk and Rathje’s claim that ‘in general, band and urban, state-level societies stress exchange between households and groups, while predominantly agricultural societies and those with mixed economies pool within the household’.¹⁵⁵ Since the present research deals with predominantly sedentary, horti-/agricultural societies, by following Wilk and Rathje it is possible to hypothesize that households at Çukuriçi Höyük and Platia Magoula Zarkou predominantly pooled resources within households, rather than exchanged between them. Conclusions based on this hypothesis, however, must be scrutinized against the archaeological data from the two sites under investigation.

Within the Aegean basin, household archaeology has already proven to be a constructive method for addressing social organization at a single EBA 1 site, such as Troy and Demircihöyük.¹⁵⁶ This is also the case at the regional level, through the comparison of settlement organization at the EBA 1 coastal western Anatolian sites.¹⁵⁷ However, none of these previous studies aimed at assessing contemporaneous developments on both sides of the Aegean Sea during the EBA 1/2 – in western Anatolia and Thessaly – simultaneously. By doing so, the present study recognizes possible climatic similarities between the two Mediterranean prehistoric

¹⁵⁰ See Kramer 1982; Horne 1994.

¹⁵¹ Wilk – Rathje 1982, 621.

¹⁵² Wilk – Rathje 1982, 631.

¹⁵³ Wilk – Rathje 1982, 633, *italics mine*.

¹⁵⁴ Wilk – Rathje 1982, 631–632.

¹⁵⁵ Wilk – Rathje 1982, 627.

¹⁵⁶ Durgun 2012; Ivanova 2013; Ivanova 2016.

¹⁵⁷ Kouka 2002.

sites, but also differences in their centrality within the EBA 1 exchange networks, which could potentially have influenced their different socio-economic developments.

This project is based on an interdisciplinary undertaking of research by four early-stage researchers. Two of my archaeology colleagues studied pottery through the household archaeology approach, following Wilk and Rathje's methods,¹⁵⁸ which have recently been extended to the Aegean Neolithic period by Stella Souvatzi.¹⁵⁹ By analysing pottery finds from each room, my colleagues Maria Röcklinger and Constanze Moser identified household activities such as food storage, preparation, and consumption, in order to understand whether these practices were household-based or whether the pooling of resources through communal storage could be detected. At Çukuriçi Höyük, Stephanie Emra complemented this study with an analysis of zoological remains and by looking at differences in diet between households, butchery practices, and herding strategies. For Platia Magoula Zarkou, the present research relies on the detailed zooarchaeological analyses of Cornelia Becker,¹⁶⁰ which have recently been re-evaluated by Paul Halstead.¹⁶¹

Whereas my colleagues each worked on a single site, which they contextualized through a detailed analysis of archaeological data respectively, I contextualized each of these two sites through concepts and insights from anthropological literature. Consequently, I compared the two sites within their wider geographical region, and, to a certain extent, also to each other. The overarching question leading our DOC-team research aimed at understanding the extent to which there was some hierarchical social differentiation visible within Platia Magoula Zarkou and Çukuriçi Höyük, or if they were organized on a more 'egalitarian' basis. Further questions concerned the possible processes of proto-urbanization within the EBA 1 Aegean basin, and changes between the Late Chalcolithic and the Early Bronze Age in terms of social organization. To accomplish this research objective, two sets of questions guided my own research. The first set addresses the households and domestic economies at Çukuriçi Höyük and Platia Magoula Zarkou:

- What were the roles of households or of 'householding' in the Early Bronze Age in eastern Mediterranean regions, and how can households be defined?
- Did households in Çukuriçi Höyük and Platia Magoula Zarkou correspond to the core units of a Domestic Mode of Production:¹⁶² i.e., were they primarily self-supporting units based on production for local consumption – or were they more specialized units,¹⁶³ primarily geared to production for exchange, and even to an extent for tribute as well?
- How can anthropology's insights into 'Bronze Age economics'¹⁶⁴ be reconciled with answers to these questions?

These questions will be addressed by analysing the overlapping activities within households from a bottom-up perspective, in which household activities, on the one hand, represent subsistence practices, but, on the other hand, also provide information about which practices defined a household as a social unit. The second part of the examination links these analyses of households to a top-down perspective, through regional and supra-regional comparison of EBA 1/2 householding practices. Using a combination of both bottom-up and top-down approaches, this study explores the extent to which, and if at all, this data fits with a more or less centralized tribal social organization, by addressing the second set of research questions:

¹⁵⁸ Wilk – Rathje 1982.

¹⁵⁹ Souvatzi 2014.

¹⁶⁰ Becker 1991; Becker 2000.

¹⁶¹ Halstead 2022.

¹⁶² Sahlins 1972.

¹⁶³ Earle 2002.

¹⁶⁴ Earle 2002.

- Which, if any, of the proposed models (ideal types) of a) a centralized chiefdom (e.g. a chiefdom with a unilineal descent system or a chiefdom with a conical clan structure), or b) a decentralized, acephalous tribal society (e.g. a segmentary lineage system tribe, or a big man or great man society) is appropriate to describe the social organization in these settlements at the dawn of the Bronze Age?

Although the two models – tribe and chiefdom – have been understood as stages of social evolution by several authors,¹⁶⁵ the current study is decoupled from these neo-evolutionary trajectories. Instead, as previously mentioned, it treats tribes ‘as a family of sociopolitical forms’¹⁶⁶ in which both acephalous tribes and centralized chiefdoms are understood as models of social organization¹⁶⁷ suitable for assessing the local history and social organization at Çukuriçi Höyük and Platia Magoula Zarkou.

The approach of testing this family of social organization models has been based on an informed choice. On the one hand, scholars have argued that chiefdom social organization was common across Europe from the Neolithic up to the time of the Roman Empire.¹⁶⁸ On the other hand, archaeological data from North and South America and New Guinea have shown that acephalous tribes may have existed prior to the emergence of early states¹⁶⁹ rather than only as a response to them.¹⁷⁰ As this may also be the case for the period and region of my interest, I refer in general to a tribal social organization for both more or less decentralized segmentary tribes, including big man and great man societies, as well as politically and economically centralized chiefdoms.¹⁷¹ Thinking of different models within a broader range of categories rather than in terms of a binary opposition blurs the lines of evolutionary sequences and acknowledges a possible range of coexistence of different models (or rather, versions thereof) of social organization within a given geographical area.

Considering the anthropological axiom that households in non-state societies have never been self-sufficient, but have always been involved in some sort of exchange¹⁷² between households belonging to the same residence groups and also outside such groups, the examination of exchange networks and their scope comprises an important part of this body of analysis. This is also important because of the previous hypothesis that sedentary societies with mixed economies tended to pool resources within households rather than exchanging between households.¹⁷³ As exchange in non-state societies always depends on social relations, regional or supra-regional transactions between persons or groups will be contextualized with respect to political economy.

Although the primary scope of this study is limited to the EBA 1 period (3000–2700 BC) in western Anatolia and EBA 2 (around 2500/2400 BC) in Thessaly, these local histories will be studied in relation to the earlier archaeological layers at the two sites. This includes consideration of the preceding Late Chalcolithic period (3350–3050 calBC) for Çukuriçi Höyük and the Late Neolithic layers (5500–5300 calBC) for Platia Magoula Zarkou when studying households and householding practices, in order to trace any changes between the two periods. Particularly at Platia Magoula Zarkou, where detailed analyses of pottery finds have not been completed for the EBA 2 period, due to unforeseen circumstances, and were

¹⁶⁵ Service 1962; Sahlins 1972; Earle 2002; Kradin et al. 2011.

¹⁶⁶ Rosen 2016, 3.

¹⁶⁷ Godelier 1977; Gingrich 2015b. For a discussion of these types of ‘tribal’ social organization, see Chapter II.

¹⁶⁸ Mann 1986; Earle 2002.

¹⁶⁹ Parkinson 2002.

¹⁷⁰ Fried 1975; Scott 2009.

¹⁷¹ Gingrich 2015b.

¹⁷² Sahlins 1972, 83.

¹⁷³ Wilk – Rathje 1982, 627.

therefore not yet available for my study, I decided to ‘follow households’ and hence discuss more or less unique Late Neolithic evidence for householding at Platia Magoula Zarkou.

Such a focus on domestic spaces excludes the EBA 1 cemeteries which often overshadow discussions of everyday social organization. Therefore, this study moves from taking the individual as the point of departure for the analysis, and instead prioritizes the socio-economic unit to which an individual belongs – a household – as the core unit of study. Another reason for not studying the EBA 1 cemeteries is the relative scarcity and lack of precisely dated burial records for EBA 1 in the Aegean basin. Extensively excavated EBA 2 burials, however, reflect the two-tiered social organization, divided into the chiefly elite and commoners (based on the presence or absence of metal grave goods), which mirrors the organization of the EBA 2 settlements, equally divided into upper and lower ‘towns’. Correspondences between EBA 2 data from the burial record and settlement organization then provide additional support for studying EBA 1/2 settlements and household economies, as these inevitably determine people’s everyday lives and reflect the local social organization.

Informed by historical ecology, this study takes into consideration both the built and un-built environment as a single analytical unit. Firstly, this is because the role of the environment was largely ignored by Goody, despite his claims that the appropriation of nature was a precondition for the emergence of stratified societies. Secondly, this is to avoid projections of contemporary binary understandings of the natural environment on prehistoric data, and instead to acknowledge *people’s dwelling perspective*, which implies that ‘there are not two kinds of history but one, comprised by the interplay of diverse human and non-human agents in their mutual relations’.¹⁷⁴ Thirdly, because this is the only possible way to approach the data in question, which consists of archaeological assemblages (architecture, pottery, stone and bone tools, etc.) and also detailed zooarchaeological analysis (animal bones). For this reason, I use the archaeological data in a ‘holistic’ way, drawing conclusions not only from the pottery and animal bones analysed by my DOC-team colleagues, but also from previously published reports of metallurgical production, architecture, botanical remains, and stone and bone tools at each site. With this approach, I aim to trace ‘the connections in a rounded (anthropological) view’,¹⁷⁵ as Goody put it in his book *Metals, Culture, and Capitalism*. Primarily relying on archaeological analyses from single sites, I interpret these in relation to ethnographic and ethnoarchaeological data from sedentary non-state societies, as well as wider EBA 1/2 regional developments. Only then do I compare the two cases to each other.

Historical Anthropology, Historical Ethnography, and Controlled Comparison

In lieu of conducting long-term ethnographic fieldwork through participant observation, which is not the optimal track to theoretical advancement in all cases, and rather than learning a new language for this study, I needed to develop my understanding of prehistoric archaeological data. I spent most of my study time engaging with previously published anthropological and archaeological literature and bolstering my proficiency in practices that are foreign to the ethnography-centred research practices of many of my colleagues. Due to space and time limitations on conducting participant observation relevant to the empirical archaeological material, my project relies on methods of historical anthropology¹⁷⁶ in which ‘anthropologists operate in order to do history, using a central method of local-level research and exploring issues related to ‘autonomy, deviance, protest’ and social change’.¹⁷⁷ Scholars of historical anthropology ‘undermine any clear-cut distinction between language-based forms of historiographic

¹⁷⁴ Ingold 2005, 501.

¹⁷⁵ Goody 2012, xii.

¹⁷⁶ Kalb – Tak 2005a; Kalb – Tak 2005b; Silverman – Gulliver 2005; Gingrich 2008; Gingrich – Knoll 2018.

¹⁷⁷ Silverman – Gulliver 2005, 152.

sources and other (non-verbal) historically relevant source materials'.¹⁷⁸ As I am deprived of my own insights stemming from ethnographic fieldwork, I aimed to draw from 'comparative insights rooted in ethnographic fieldwork *by other researchers*',¹⁷⁹ particularly those centred around sedentary non-state societies, through which I addressed the archaeological evidence. These ethnographic descriptions have been read with and against the grain, with a strong focus on household economies (animal breeding strategies, slaughtering regimes, plant cultivation, available technology, local ecological conditions, etc.) and political organization, to relate ethnographic insights to the material archaeological record. In some ways, my work followed the genre of 'historical ethnography', which 'analyses a past era of a *particular locality* using *archival sources* and, when possible, *local oral history*. Very commonly, historical ethnographers try to link the past with the present, chronologically and processually, in order to explain the present by understanding the past.'¹⁸⁰

In the present research, a *particular locality* is limited to the excavation trenches and their immediate surroundings at each of the two sites as well as other regional excavated and analysed sites, whereas the *archival sources* have been replaced with archaeological material finds that have been thoroughly analysed by other specialists in the field. These material sources cannot shed light on EBA local oral histories. However, by combining this material evidence with comparative ethnographic insights on sedentary non-state farming societies, it is possible to address the socio-economic importance of households and, consequently, socio-political organization in the Aegean basin at the dawn of the EBA through the available data. If these '(non-verbal) historically relevant source materials'¹⁸¹ – particularly relevant to historical anthropology – are understood in the broad sense of the term, then interdisciplinary inquiries in historical anthropology cannot and should not exclude prehistoric material:

'Historical ethnographies may also be produced for periods that are entirely in the past and for which only archival data can be used. Such work is, of course, a more straightforward invasion of the historian's field. It is also a departure from conventional anthropological concerns with the present day. Because of this, such ethnographies are uncommon, although their numbers have increased in recent years.'¹⁸²

Although my study is one of these 'uncommon ethnographies' that are not concerned with the present day, I have not attempted to 'invade the prehistorian's field'. Instead, I aimed at conducting a comparative interdisciplinary inquiry into the EBA socio-political organization in the Aegean basin at the dawn of the EBA through interdisciplinary collaboration between socio-cultural anthropologists and prehistoric archaeologists.

I had the good fortune, however, to join my research colleagues in the field. In March 2017 I spent a week in Larissa with Constanze Moser, the DOC-team colleague who introduced me to studying pottery from Platia Magoula Zarkou. There, I had a first-hand opportunity to familiarize myself with the 'scarcity of data'¹⁸³ we had discussed since our first meeting in a beer garden in Vienna's 19th district in June 2015. The research process at Çukuriçi Höyük did not, however, reflect the hopes anticipated in Vienna. Due to strained diplomatic relations between Austria and Turkey in 2016, the Austrian Archaeological Institute was not granted a research

¹⁷⁸ Gingrich – Knoll 2018, 44.

¹⁷⁹ Gingrich – Knoll 2018, 38.

¹⁸⁰ Silverman – Gulliver 2005, 152, italics mine.

¹⁸¹ Gingrich – Knoll 2018, 44.

¹⁸² Silverman – Gulliver 2005, 152–153.

¹⁸³ This is a relative and subjective statement. It reflects the position of a socio-cultural anthropologist at the beginning of an interdisciplinary undertaking. I have benefitted enormously from the interactions with my DOC-team colleagues, and learned that asking the right questions for a prehistoric setting is a particular skill, which should be learned by doing. For this reason, I addressed many awkward questions to my colleagues that usually led to lengthy discussions of what can and cannot be seen archaeologically.

permit between autumn 2016 and August 2018. Since the bulk of the EBA material had not yet been documented at Çukuriçi Höyük, I assisted Maria Röcklinger and Stephanie Emra in the documentation and preliminary analysis of pottery and animal bones in the depot of the Austrian Archaeological Institute in Selçuk over a period of two months, between October and November 2018. This was a unique opportunity for me to acquire hands-on experience of the archaeological classification of finds, their documentation and statistical analysis, as well as more qualitative modes analysis. There, I truly got my hands dirty with the pottery from Çukuriçi Höyük and the thousands of cockle shells that I documented. Although I will rarely refer to field events within this study, I should disclose to the ‘lone wolf’ anthropologists among my colleagues that I found the opportunity to work jointly and archaeologically deeply rewarding due to its team-based approach to learning.

From the outset, this study has been designed from a comparative research perspective. Household archaeology – a comparative method in its own right – has in this study been complemented with a qualitative controlled and regional comparison.¹⁸⁴ By following selective, qualitative choices of ethnographic examples for anthropological comparison in this study, I have not subscribed to either a direct historic approach or ethnographic analogy.¹⁸⁵ I took ethnographic examples as comparable units of evidence that could explain the archaeological record more fully, through anthropological concepts, embedded in wider socio-cultural anthropological debates.

I would like to distance myself from interpreting the Baruya, the Nuer, the Tikopia, and other ethnographic cases chosen in this study as ‘living fossils’ or living templates for the Early Bronze Age or Late Neolithic Aegean societies. This book does not subscribe to a cultural-ecological framework by comparing societies in the same ecological niches through time and space. Nor does it subscribe to a direct historical analogy. Instead, having little interest in exploring exclusively how humans adapt to their landscape, I chose to follow historical ecology. This approach treats both the environment/landscape and human practice as a single analytical unit in which ‘environments are in a sense adapted to the socio-cultural and political systems (or to humans’ needs and desires).’¹⁸⁶ Historical ecology enables a ‘comparison among diverse sociopolitical entities in relationship to local landscapes’ as well as ‘larger phenomena such as regions’¹⁸⁷ that allows us to bring ethnographic and archaeological contexts into dialogue.

As can be seen in Chapter II below, Marshall Sahlins initially tried to tie models such as segmentary lineage systems to specific ecological zones. However, from later studies, it became clear that it is not human adaptation to the environment that determines a specific social organization. Instead, contextualization of socio-political and material means as a single unit may, in this case, override the importance of ecological conditions. Accordingly, the ethnographic cases in my study, the Baruya, the Nuer, and the Tikopia are not ‘living fossils’ of the Bronze Age societies such as Platia Magoula Zarkou and Çukuriçi Höyük, but living and recent societies within the broad and diverse category of what Eric Wolf called ‘people without history’.¹⁸⁸ This encompasses sedentary societies without writing, state organization, and other urban features, yet with complex and diverse local, unwritten histories, centralized or decentralized political entities, residing in villages or proto-urban settlements not exceeding 1000 inhabitants. Their records are affected by internal transformations and external influences, this being true of both my ethnographic and the archaeological cases. It is these shared features rather than ‘fossilized remains’ of modern ethnographic cases that make these sites and ethnographic cases comparable. And if anthropology’s aim remains understanding the ‘full sweep

¹⁸⁴ Egan 1954; Gingrich – Fox 2002; Gingrich 2012a; Gingrich 2020.

¹⁸⁵ See Peregrine 1996 for a critique of ethnographic analogy and a direct historical approach.

¹⁸⁶ Balée – Erickson 2006, 4.

¹⁸⁷ Balée – Erickson 2006, 12.

¹⁸⁸ Wolf 1982.

and complexity of cultures across all of human history’,¹⁸⁹ then socio-cultural anthropologists should not only compare but also leave room to be challenged and puzzled by archaeological remains – especially those that cannot be fully or easily explained otherwise.

In one of our recently submitted pieces on taskscape and seasonality, co-authored with my DOC-team colleague Stephanie Emra, both reviewers voiced their concerns about comparing the Çukuriçi Höyük ovicaprid culling profiles to the Baruya pig slaughtering practices in view of the zoographic fact that sheep/goats and pigs reproduce differently and therefore cannot be compared. This is similar to what has been described as a ‘folkloristic’ misleading requirement that ‘one should not compare apples and oranges.’¹⁹⁰ On this note, I agree with an argument published in *The SAGE Handbook of Cultural Anthropology* that ‘comparing apples with oranges may make a great deal of sense if your research questions deal with annual cycles of fruit reproduction, or with their nutritional value for that matter. If nobody had ever compared squirrels and dolphins, we would not have realized that both are mammals.’¹⁹¹ Therefore, as scholars within a four-field anthropology, we may benefit from loosely defined boundaries of cases that could be compared to gain certain new insights instead of *a priori* defining comparable units. Following the initial introduction of the methodological and theoretical predispositions of this study, let us now outline the impact of this study and the structure of the book.

1.5. The Impact of this Study and the Structure of the Book

This book has been written to speak to a heterogeneous audience with different backgrounds. A common denominator to this audience is binary oppositions between old and new schools of thought within both disciplines in which this inquiry is situated, namely socio-cultural anthropology and prehistoric archaeology. Although some scholars may understand the two disciplines as different sides of the same coin, this is not the mainstream understanding of most of my colleagues trained in Central Europe. Although I would agree with such a minority’s framing of the two disciplines as one within any four-field approach to anthropology, I here also address the majority audience from the two subdisciplines as belonging to two distinct disciplinary contexts in their Continental European dimensions.

First, this book will speak to socio-cultural anthropologists interested in old and new theories of social and gendered kinship relations. As the book addresses how different ways of imagining and enacting social proximity can be understood through prehistoric archaeological records, it aims at linking the ethnographic material with the archaeological record from the two sites of inquiry. This is far from an easy task. It will be shown in the following chapters that simultaneously thinking through both ethnographic and archaeological cases may bear some fruitful results, yet it continuously poses challenges.¹⁹² But to question some of the long-standing interpretations and to offer alternative or complementary interpretations based

¹⁸⁹ AAA 2021.

¹⁹⁰ Gingrich 2012a, 210.

¹⁹¹ Gingrich 2012a, 210. For a further discussion of comparing apples and oranges in cross-cultural anthropological research, see Ember 2016.

¹⁹² These challenges often cannot be resolved by thinking through archaeological records alone. Limitations of the archaeological record in recognizing prehistoric social inequalities or the emergence of chiefdoms have been recognized elsewhere: ‘Clearly, some kinds of inequality cannot be detected by archaeology alone’ (Flannery – Marcus 2012, 215). Therefore, ‘discovering the institutions of those earlier societies is a task that pushes archaeologists to the limits of their interpretative skills’ (Flannery – Marcus 2012, 259). These limitations within (prehistoric) archaeology, then, open up a new heuristic space for exploration by socio-cultural anthropologists. Only then will it be possible for socio-cultural anthropological insights to serve not only as a means for interpretation, but they could also be challenged through new archaeological discoveries, and vice versa. Archaeologists and socio-cultural anthropologists working in conjunction may then turn conjectures about the

on multiple pools of data used in interpretation requires socio-cultural anthropologists and prehistoric archaeologists to work together. This conjuncture involves the application of anthropological concepts in dialogue with systematic archaeological investigations to address local and regional histories in the distant past.

Second, the book aims to speak to archaeologists interested in post-Neolithic, more or less sedentary societies, until the early metal ages in both the Old and New World. For archaeologists, the book provides one of the rare but now existing demonstrations of how socio-cultural theories, models, and detailed ethnographic cases can enrich the interpretation of archaeological data.¹⁹³ In my attempt as a socio-cultural anthropologist, I achieved this through close cooperation with, rather than in isolation from, the archaeologists and other experts in the field. This is the key difference from Jack Goody's approach, which pioneered the way for socio-cultural anthropologists to address the archaeological data – in isolation from prehistoric realities.¹⁹⁴ The more recent contributions from socio-cultural anthropologists working with archaeologists have considerable potential to transform borders into fluid boundaries between the two disciplines within the four-field anthropology.

Third, the two sites considered in this study fall into the category of old and new sites respectively. The old excavation at Platia Magoula Zarkou and the new excavation at Çukuriçi Höyük were conducted differently, and for that reason, their suitability for household archaeology also differs accordingly. Although the limited evidence from Platia Magoula Zarkou has been seen as the key issue for undertaking household archaeology,¹⁹⁵ for me, it was an exceptional experience of how to deal with two different pools of archaeological data, tackling their differences and similarities. By understanding the research bias towards the Neolithic period in Thessaly, today, I also have a much better understanding of why we know so little about Platia Magoula Zarkou's Early Bronze Age and so much about the Neolithic period at this site and within the wider region of Thessaly.

Finally, yet importantly, this book would not be a book, if I had not included at least one exceptional find. Is it not through the exceptional finds that a broader public gets to know what archaeology is about? From the schoolbooks depicting Venus of Willendorf statues to the 21st-century media commonly reporting about the exceptional finds recently uncovered, archaeologists are never shy about speaking of exceptionality. They describe it in detail, although the exceptional finds may not necessarily be representative of the whole village or the city, not to mention a region or the entire period. But this is beside my point, which was to show that if a knowledgeable reader were to look at this book's content list, then I am sure they would be expecting to read about the house model uncovered from Platia Magoula Zarkou, considered as such an exceptional find. Unfortunately, the title does not make a fair claim to the record of Platia Magoula Zarkou as my second case study. Nevertheless, the book will not disappoint

past societies into informed conclusions that could lead to constructions of new conjectures awaiting exploration in tandem.

¹⁹³ For similar studies, see Weiss-Krejci 2004; Flannery – Marcus 2012; Gingrich – Schweitzer 2014; Wengrow – Graeber 2015; Gingrich 2017a; Wengrow – Graeber 2018; Graeber – Wengrow 2021.

¹⁹⁴ Only in Goody's later work *Metals, Culture, and Capitalism* (Goody 2012) does Goody show interest in the archaeological data. In his ambitious piece on the search for and trade of metals from the Bronze Age to the Industrial Revolution, he aimed at inspiring scholars and students across the social sciences rather than addressing experts in the field. In contrast to Goody, I hope this contribution does both: inspires students and contributes to current scholarly debates.

¹⁹⁵ The fact that the Early Bronze Age excavation at Platia Magoula Zarkou comprises only one excavated room within the settlement has been continuously discussed as a drawback for conducting household archaeology. Household archaeology generally requires a larger number of exposed archaeological units (e.g. rooms, structures) for intra-site comparison. Only then is it possible to make inferences concerning economic strategies at a particular settlement (Tringham 2015). In the course of the research, I have therefore decided to draw on regional comparison of remains from Platia Magoula Zarkou to gain a better understanding of how representative finds from Platia Magoula Zarkou might be.

the reader. Chapter VI indeed provides a few anthropological remarks on the exceptional find of Platia Magoula Zarkou's Middle Neolithic house model. The house model was carefully analysed by Eva Alram-Stern, who has generously shared her unpublished work with me, which I used for further anthropological contextualization.

Before outlining the more specific audience of this book, I would like to conclude with a note on the issue of old and new within archaeology, without providing a final answer on how to deal with it. From my reading of archaeology, both old and new archaeological excavations, old and new archaeological discoveries commonly suffer from 'exceptionality fever'. More often than not, we hear about surprising discoveries through archaeological excavations, previously unknown or even unimaginable. I by no means want to downplay the importance of such discoveries. More often than not, these discoveries turn prehistoric excavations into archaeological labs. These archaeological 'lab sites' generate profound, up-to-date, scientific knowledge, as seen from the Çatalhöyük and Göbekli Tepe excavations in the Old World, offering little room for qualitative, anthropological comparison. However, if we look deeper into the ethnographic records, beyond these exceptional sites, I am convinced that there is an enormous potential to make new archaeological discoveries old through ethnographic comparison, and old socio-cultural anthropological discoveries new through excavations. That is also one of the aims of this book. The real issue, then, is not between the old and new, but how to translate between two disciplines and compare, to gain new insights that cannot be generated through fieldwork alone. After all, if 'anthropological concepts are available that are richly informed by ethnographic evidence and theoretical debate', then 'they may well be considered for critical comparative application along specific historical timelines.'¹⁹⁶ By utilizing the relevant anthropological concepts, certain historical or regional particularities and processes may be explained in 'new and more profound ways'.¹⁹⁷

More specifically, this book addresses the growing but still small networks of anthropological archaeologists. In Chapter II, the book provides an overview and presentist perspective of possible political systems applicable to sedentary non-state, non-scriptural societies. Documented, compared, and modelled by other social anthropologists, this chapter does not provide any explicit archaeological parameters to identify such societies but provides a basis upon which qualitative assessment of diverse pools of data can be built. Instead of conducting a 'checklist archaeology', this contribution aims to bear the models in mind while analysing archaeological data. Chapter II provides an overview of major kinship and socio-political traits that define such societies, which could be taken into consideration by anthropological archaeologists or other archaeologists when discussing the social organization of sedentary non-state, prehistoric societies. Some of these traits can be found in the subsequent chapters, where the evidence shows what types of competition between households we can expect with certain types of animal breeding strategies.

This book also aims to speak to those historical anthropologists interested in human history and considering data other than scriptural records. The volume discusses households and social organization through Early Bronze Age materiality by means of prehistoric archaeological data. As the study of materiality is gaining in importance, in particular within the fields of visual and digital anthropology, this work presents an alternative path towards discussing the materiality of things. It considers and presents prehistoric material data as an archive of knowledge, which can be further contextualized through socio-cultural anthropological insights. In particular, the book would appeal to historical anthropologists interested in socio-political systems, craft organization, and regional exchange in non-state societies and how these could be traced through prehistoric archaeological data. For example, by following people and traces of *kula* exchange in the Trobriand Islands, Malinowski generated major

¹⁹⁶ Gingrich 2012a, 207.

¹⁹⁷ Gingrich 2012a, 207. For the added value of translation, see Benjamin 1968 [1923].

insights into a regional gift exchange and emulation of elites necessary for the reproduction of Trobriand chiefdoms. By following material exchange objects, archaeologists may provide detailed evidence of such transactions through material analyses. Archaeologists compensate for their inability to follow and observe people – well known to socio-cultural anthropologists – through the precise identification of sources and qualitative analysis of the spatial distribution of finds, combined with qualitative interpretations, to address the same questions as are asked by socio-cultural anthropologists. Therefore, archaeological material data, providing important insights into the diversity of human societies, should be treated as equal, if not at times even more valuable and certainly much broader in scope, than the written, archival sources used by historical anthropologists. But to treat prehistoric material sources as equally valuable sources of knowledge in comparison to written, historical records, more historical anthropologists would need to show some basic interest in learning the language of materiality, which is what I have tried to do in this contribution.

Last but not least, the book will hopefully appeal to specialists in Aegean prehistory, interested in Early Bronze Age developments on each side of the Aegean Sea. Although greatly inspired by Renfrew's *The Emergence of Civilization*, this book is, in comparison to Renfrew's, nothing but a narrow, site-based study of Early Bronze Age developments in the region. Unlike Renfrew's study, which treated the tribe as a stage of social evolution and therefore rejected its application in the Aegean Bronze Age, this book treats tribe as a 'fuzzy' category, a family of imagined communities constructed through a bottom-up perspective and agency. In their socio-cultural diversity and theoretical insights, these imagined communities can be inferred from ethnographic and archaeological data. Instead of discarding the possibility of socio-political constellations other than chiefdoms from the very start of research on the Early Bronze Age Aegean, which was Renfrew's theoretical predisposition, this book has its conceptual foundation in the diversity of socio-political systems that could coexist in time and space, also during the Early Bronze Age in the Aegean. The conceptual premise of socio-political diversity intersects with one of the book's main insights, i.e. that the integration of crafts such as metallurgy differed greatly between the Early Bronze Age sites in the eastern Aegean and western Anatolia, which may have corresponded to differences in socio-political integration. Therefore, the book questions the extent to which metal production ever substantially influenced the pre-existing modes of subsistence and the making of regional alliances, to truly understand the 'metal shift' that has been previously inherently correlated with the development of chiefdoms in the region.

In Walter Benjamin's seminal work on the *Task of a Translator*,¹⁹⁸ he explained what a good translation must *be* and must *do*: 'a real translation is transparent; it does not cover the original, does not block its light, but allows the pure language, as though reinforced by its own medium to shine upon the original all the more fully.'¹⁹⁹ I attempted the same in this study – trying not to mask the archaeological data through anthropological theories and concepts, but to make archaeological data shine more fully by its own medium. A similar approach can also be traced in *The Creation of Inequality: How our Prehistoric Ancestors set the Stage for Monarchy, Slavery, and Empire*,²⁰⁰ in which the two archaeologists Kent V. Flannery and Joyce

¹⁹⁸ Benjamin 1968 [1923].

¹⁹⁹ Benjamin 1968 [1923].

²⁰⁰ In their rich evaluation of both anthropological and archaeological literature, Kent V. Flannery and Joyce Marcus contributed significantly towards the recognition of socio-cultural anthropological models for discussing social organization in prehistory (Flannery – Marcus 2012). Like kinship terminology that entertains reversibility (Trautmann – Whiteley 2012), models of social organization may also be reversible, as known from ethnographic examples. Flannery and Marcus (2012) support such reversibility of social organization through the famous ethnographic example of Kachin (Leach 1954). Unlike Flannery and Marcus's book, which identified parallels in social organization across space and time, from achievement-based societies with ritual houses to the early states with palace estates, this study limits the archaeological to two sites respectively.

Marcus draw from rich ethnographic literature to address and further discuss material traits of (prehistoric) inequality and ritual documented through architecture, burials, and the exchange of goods. But whereas these authors translated material evidence from their own language (archaeology) to a foreign one (socio-cultural anthropology), in my case, I have translated from a foreign language (archaeology) into my own (socio-cultural anthropology).

When translating from a foreign language, Benjamin has noted that ‘the basic error of the translator is that he preserves the state in which his language happens to be instead of allowing his language to be powerfully affected by the foreign tongue.’²⁰¹ A good translator, according to Benjamin, must, therefore ‘expand and deepen his language by means of the foreign language’.²⁰² I have tried my best to influence the jargon of socio-cultural anthropology with the syntax of archaeological material in my study. Therefore, with this interdisciplinary exercise in translation, I aimed to encourage speakers of my language – socio-cultural anthropologists – to pursue historical anthropology through archaeological data and to show speakers of my foreign language – archaeologists and other specialists in the field – that ethnographic contextualization of non-spectacular evidence for prehistoric households may add some shine to it, as pointed out by Benjamin’s remark on translation almost a century ago.

The primary significance of this study is in the use of the assessment of ideal types or models²⁰³ of social organization for sedentary, non-state societies, developed within socio-cultural anthropology. These will be tested against the archaeological record from Çukuriçi Höyük and Platia Magoula Zarkou in order to shed more light on the local social organization at the dawn of the Early Bronze Age and the Late Neolithic period in Thessaly. The present study aims to allow anthropological concepts to be influenced by archaeological data, rather than only imposing the former upon the latter. This undertaking will not be limited only to the two focal points of my research, but will be extended to the Aegean basin as a broader EBA region. Based on archaeological and zooarchaeological finds, this study aims to address the extent to which kinship patterns, socio-economic networks, household practices, and hierarchical relations can be defined, as well as analysed, through archaeological data. More broadly speaking, it aims to develop a framework of what socio-cultural anthropology can say about sedentary non-state societies in moderate climate zones. Besides appealing to the interests of historical anthropologists and prehistoric archaeologists, this study is also targeted at scholars interested in household economies in non-state societies that were divorced from early urban states.

A secondary contribution, one which both continues and disrupts a 1970s research tradition²⁰⁴ from the presentist perspective, lies in addressing what socio-cultural anthropology today can say about early non-state societies in general. A valuable contribution will be highlighted by drawing conclusions from the actual archaeological data, as part of a wider current concerned with rethinking grand narratives within socio-cultural anthropology. A similar approach has recently been fruitful within the archaeo-anthropological literature emerging from interdisciplinary studies of hunter-gatherer societies²⁰⁵ and more or less sedentary non-state societies in Anatolia.²⁰⁶

The book is structured in three parts. Part I consists of an introduction to the topic, including the research question, methodology, and an outline of material similarities and differences evident from the archaeological record of EBA 1/2 in the Aegean basin (Chapter I). The literature review (Chapter II) provides a thorough diachronic discussion of anthropological social organization models applicable to sedentary societies, how these have changed over time, and

²⁰¹ Benjamin 1968 [1923].

²⁰² Benjamin 1968 [1923].

²⁰³ Ideal types or models of social organization are used here interchangeably. They refer to what Sahlins 1963, 286 called ‘abstracted sociological types’.

²⁰⁴ Such as the work of Sahlins 1972; Claessen – Skalník 1978; and, a decade later, Godelier 1986b.

²⁰⁵ Wengrow – Graeber 2015; Gingrich 2017a; Wengrow – Graeber 2018.

²⁰⁶ Gingrich – Schweitzer 2014.

which remain valid for the chronological frame of this study. It also summarizes the state of the discipline on the topic of social organization in the EBA 1/2 Aegean basin, including a discussion of non-state social organization models developed within socio-cultural anthropology as the most probable models of social organization for Çukuriçi Höyük and Platia Magoula Zarkou. As the model/stage of *chiefdom* social organization has previously been tested by archaeologists, whereas *tribe* was rejected by them, the outcomes of those studies serve as a good starting point for my own research, which addresses the same question through a different approach: namely household archaeology in an interdisciplinary manner.

Part II is divided into two parts, with Chapters III and IV dealing with Çukuriçi Höyük, and Chapters V and VI focusing on Platia Magoula Zarkou. Each site is introduced through a chapter on the (historical) ecology (Chapter III for Çukuriçi Höyük and Chapter V for Platia Magoula Zarkou). In these, I first describe the prehistoric landscape and local resources, and provide an overview of the local diet, animal breeding strategies, and subsistence practices, and then contextualize these through ethnographic analogies. The second chapter for each site (Chapter IV for Çukuriçi Höyük and Chapter VI for Platia Magoula Zarkou) deals with household economies by analysing overlapping household activities in different rooms, including the preparation and consumption of food and craft activities. In the case of Çukuriçi Höyük, the analysis of household economies largely revolves around craft organization, namely metallurgical production, as the site was identified as a centre for metal production during the EBA. In the case of Platia Magoula Zarkou, the household chapter primarily deals with the Late Neolithic house model, non-wheel-made pottery production, and its implications for regional exchange, as the site was identified as a regional production centre for grey on grey pottery during the Late Neolithic.

Part III consists of two chapters. In Chapter VII, I address the assemblage of household economies from Çukuriçi Höyük and discuss these with reference to on-site and supra-regional economies beyond the Aegean basin. Although I had originally planned to compare the supra-regional economies between the two sites, the record at Platia Magoula Zarkou did not provide evidence for long-distance exchange beyond the Aegean basin, whereas that at Çukuriçi Höyük did. This allows me to address to what extent dwellers at Çukuriçi Höyük had access to everything they needed or if some had more than they needed, and if so, how regional trade networks transformed local communities in western Anatolia. In the conclusion chapter (Chapter VIII), I develop my main conclusions about households at each of the two sites and summarize the extent to which the assemblage at each site complies with any of the anthropological social organization models, such as great man or big man societies, acephalous tribes, or chiefdoms. I summarize the main outcomes of this research, and discuss possible current and future contributions by socio-cultural anthropologists to understanding the emergence or maintenance of social inequality within sedentary, non-state societies in moderate climate zones, as well as in general.

This book shows that from the Neolithic on, households were not only embedded in the so-called domestic and local but also in regional and supra-regional economies, which may be a commonality between non-state, small-scale sedentary societies. The difference between households in state and non-state societies is therefore largely of a quantitative type: for instance, it becomes visible in the amount, and the ratio of local and exchanged goods found within households. Neither state nor non-state sedentary societies were ever self-sufficient. Therefore, their households needed to acquire foreign items to reproduce themselves. To an extent, however, some qualitative difference between households in state and non-state societies can be seen in the mode of acquiring these goods. In non-state settings, small-scale sedentary societies commonly relied on personal relations for exchange, including specialized intermediaries at times. This did not always exclude the use of metrology, such as weights or other external measures of exchange, e.g. when baskets or pots served as a medium for measuring exchange value. Through inter-personal and kin relations, but also through specialized intermediaries, persons in sedentary, small-scale societies could reach out to distant groups

or members to gain access to foreign goods. The differentiated involvement of households in local and regional exchange, however, is not necessarily related with the degree of socio-political centralization or model of local social organization. The argument is developed in this book through the exploration of households at Çukuriçi and Platia Magoula Zarkou, and ethnographic evidence of non-state, small-scale sedentary societies. The next chapter (Chapter II) presents a diachronic literature review of the classification of non-state societies, different methods for which have been developed within socio-cultural anthropology and then applied and modified by their application to archaeological data. The chapter emphasizes the intertwined history of the approaches and methods of research between socio-cultural anthropology and archaeology in addition to presenting an overview of the state of the discipline regarding social organization in the EBA 1/2 Aegean basin. It thereby highlights the differences between my own and previous investigations on the topic. Most importantly, it addresses the concept of the tribe as a ‘fuzzy’ category, an approach which I adopt to address the archaeological data under investigation.

II. Concepts of Tribes and Domestic Economies: The Anthropological Study of Non-Literate, Sedentary Societies

‘The similarities among societies in different parts of the world were not lost on early anthropologists. Some even assumed that those societies constituted an inevitable sequence of stages, through which all human groups had passed on their way from foraging to civilization. No one believes such a thing today. In fact, some of today’s anthropologists would even deny that recognizable types of societies exist. Such denials are every bit as misguided as our predecessors’ belief in a monolithic sequence of stages.’

Kent V. Flannery and Joyce Marcus²⁰⁷

Introduction

As outlined in the previous section, my research objective follows three analytical steps. First, I address households through multiple lines of evidence available at each site. Second, based on the insights from the first analytical step, I then infer social organization at each site based on the archaeological data and controlled comparison. In a final analytical step, I compare both sites to each other as well as within their wider, regional contexts. The third step in this study resulted in analytical and conceptual results, now informed by socio-cultural anthropological insights.

To achieve this, I draw upon the anthropological literature of models of social organization among more or less sedentary, non-state societies, as documented, compared, and modelled by other socio-cultural anthropologists. These societies I address as tribes, a fuzzy category of imagined communities, which encompasses the segmentary (lineage) system tribes, great man and big man societies among decentralized constellations, as well as chiefdoms with unilineal descent and chiefdoms with a conical clan system among more centralized constellations. All of these models have their respective differences in household organization and ways of imagining the community, which I will present at the beginning of this chapter.

By outlining differences in households and ways of imagining between these five ideal types, the chapter will pave the way towards reviewing previous attempts to identify the social organization in the Aegean Early Bronze Age 1 and 2. In the third section, the chapter provides a review of terminology, and in the fourth, an explanation of how the approach followed in this contribution differs from previous studies of social organization in this wider region and period. This chapter aims to draw attention to households and forms of household organization for discussing models of sedentary, non-state societies. The common denominator of these models is that households are never self-sufficient units but are necessarily embedded in local and, to an extent, regional economies.

II.1. Tribes as Imagined Communities

In this first section, I build up the presentist understanding of tribes as imagined communities. Although this term – imagined communities – was initially coined for addressing the emergence of nation states, tribes are no less imagined than the new political constellations that

²⁰⁷ Flannery – Marcus 2012.

emerged in the 19th century, supported by institutionalized education, mass media, and mass literacy. This argument resonates with Peter Whiteley's²⁰⁸ empirical example of a tribal imagined community, among the 17th century Hopi. Through a historical anthropological approach, he showed how collective resistance to the Spanish state led to a new imagined community thorough reimagining. Collective reimagining was based on shared Hopi features such as knotted cords, shared katsina spirit representations, and the use of peyote as the imaginative fuel.²⁰⁹ The new Hopi imagined community did not, therefore, come into being through 'the loosening of constraints on aggrandizers',²¹⁰ a key feature of transegalitarian societies, which, according to Brian Hayden, encompass complex hunter-gatherer groups, horticulturalists, some agricultural and pastoralist societies, vaguely corresponding to my diverse category of sedentary tribes as a fuzzy category. Among the Hopi and many other cases described below, the imagined tribal communities came into being through bottom-up, collective representations rather than unleashed aggrandizers, who, according to Hayden, built transegalitarian societies top-down. More on this will be explained in the section to come, to underline a heterogeneity in ways of imagining within these transegalitarian or tribal imagined communities. In the 1960s and 1970s, Marshall Sahlins laid the foundation of a theoretically-driven but ethnographically grounded understanding of models of social organization, applicable to non-state sedentary tribal societies. He was inspired by the cultural ecology of (his teacher) Leslie White, senior colleague Julian Steward, and Karl Polanyi's concepts of economic embeddedness. Sahlins drew his conclusions from 'uncontrolled comparison',²¹¹ a method which he explained somewhat vaguely in his seminal article *Poor Man, Rich Man, Big Man, Chief: Political Types in Melanesia and Polynesia*.²¹² With uncontrolled comparison, Sahlins referred to an empirically grounded comparative analysis of different types of political leadership (documented ethnographically) in the search for 'abstracted sociological types',²¹³ also known as 'models' or 'ideal types' in socio-cultural anthropology. An elaborated version of such an undertaking, this time not limited to Polynesia and Melanesia but across time and space, was published in *Tribesmen* in 1968 (see Tab. 1).²¹⁴

In the preface to *Tribesmen*, 'a study of the primitive 'segmentary societies'',²¹⁵ Sahlins argued that the term

'Tribe' is like the 'nation' of older usage, a body of people of common derivation and custom, in possession of their own extensive territory ... a tribe is specifically unlike a modern nation in that its several communities are not united under a sovereign governing authority, nor are the boundaries of the whole thus clearly and politically determined. The tribe builds itself up from within, the smaller community segments joined in groups of higher order ... such a cultural formation, at once structurally decentralized and functionally generalized, is a primitive segmentary society.'²¹⁶

²⁰⁸ Whiteley 2002.

²⁰⁹ Whiteley 2002.

²¹⁰ Hayden 2016, 21.

²¹¹ Sahlins 1963, 286.

²¹² The word 'poor' in this article appears only in the title and cannot be found within the text. This usage of 'poorness' and 'poverty' stands in stark contrast to the usage applied by Brian Hayden and ethnoarchaeologists who argue that the phenomenon of poverty begins with complex hunter-gatherer societies (Hayden 2001, 579). With Sahlins, however, 'poorness' refers to a lack of fame and reputation, as opposed to their accumulation in the realm of a big man.

²¹³ Sahlins 1963, 286.

²¹⁴ For an updated version of what Sahlins calls 'uncontrolled comparison', see Sahlins 2013, 1–2. In the manner of James Frazer, 'ethnographic reports are mainly meant to exemplify rather than verify' (Sahlins 2013, 2) the idea author proposes.

²¹⁵ Sahlins 1968, vii.

²¹⁶ Sahlins 1968, vii–viii.

TRIBE (Sahlins 1968)		
The emergence of tribes	Commonly farmers or herders, but could also be foragers	
Territory	Claim of a common territory by several villages	
Social relations	Dominated by kinship ties through descent and marriage (kinship = social relation of cooperation and nonviolence)	
Law and order	Lack of any specialized institution for its maintenance, peace established through kinship alliances	
Household	Domestic mode of production (DMP), almost self-sufficient, exchange driven by need and not for profit	
Division of Labor	Division of labor by gender and age is the only full-time specialization, labor is not alienated	
Exchange	Generalized, balanced, and negative reciprocity are tied to kinship-residential sectors (household/village/inter-tribal sector)	
	Segmentary Tribe	Chieftdom
Local communities	Politically independent, includes up to a few hundred individuals, if sedentary, they claim a few square miles as their domain, rarely endogamous	Political organization established above and beyond the local community, a village may accommodate a local chieftain or a paramount chief, who may be in control of a hundred square miles of land, integration of specialized local communities
Settlement form	A compact village or an open community of scattered homesteads or hamlets	Homesteads and villages
Primary segments	Structurally and functionally equivalent	Can be specialized
Economy	Anatomistic, local communities are not integrated by a localized division of labor and exchange of complementary goods	Organic economy, local communities are integrated by a division of labor and exchange of complementary goods
Inter-tribal division of labor and trade	Present	Division of labor within a chieftdom may be as great as that between adjacent segmentary tribes
Rank	Absence of rank, age-grades and a gendered division of labor present	Ranked society, hierarchically organized descent groups
Leadership	Petty chieftain, great man or big man – they may accumulate wealth but then distribute it to engender personal loyalties	Chiefs enjoy built-in privileges and obligations regarding definite groups, they are a true authority
Presentist understanding of tribes	Great man societies, big man societies, segmentary lineage systems	Chieftdoms with conical clan, Chieftdoms with lineal descent

Tab. 1 Sahlins's understanding of tribes: shared and specific characteristics (after Sahlins 1968)

Less than two decades later, in his introduction to *Imagined Communities: Reflections on the Origin and Spread of Nationalism*²¹⁷ Benedict Anderson made use of the same categories – territory, boundary, and community – as Sahlins had used to describe tribes. However, Anderson used these three categories to explain nations and the process of nation-building. Whereas among tribes, tribal territory and its boundaries are fluid and largely undefined,²¹⁸ among nations, the territory is a finite, bounded category, within which a sovereign state ‘resides’.²¹⁹ Whilst a nation ‘is an imagined political community – and imagined as both inherently limited and sovereign’, supported by the top-down principle of print capitalism,²²⁰ a tribe builds itself from within, through kinship ties and oral history.²²¹ Despite these sharp differences regarding territory and boundary, there is a fundamental similarity between tribes and nations: both can be treated as imagined communities since ‘in fact, all communities larger than primordial villages of face-to-face contact (and perhaps even these) are imagined’.²²² Although neither Anderson’s nor Sahlins’s primary aim was to distinguish between tribes and nations, Anderson understood that imagined communities can vary greatly:

‘Communities are to be distinguished, not by their falsity/genuineness, but by the style in which they are imagined. Javanese villagers have always known that they are connected to people they have never seen, but these ties were once imagined particularistically – as indefinitely stretchable nets of kinship and clientship. Until quite recently, the Javanese language had no word meaning the abstraction ‘society.’ We may today think of the French aristocracy of the *ancient régime* as a class; but surely it was imagined this way only very late. To the question ‘Who is the Comte de X?’ the normal answer would have been, not ‘a member of the aristocracy,’ but ‘the lord of X,’ ‘the uncle of the Baronne de Y,’ or ‘a client of the Duc de Z’.’²²³

Therefore, before outlining the commonalities and differences between models of tribal groups – such as the segmentary lineage system, big man, great man, and chiefdom constellations among semi-sedentary non-state societies – it is important to acknowledge that all of these different models of tribes, just like nation states, are imagined communities. Unlike nations, tribes are defined through fluid territorial or ethnic boundaries, which are prone to change but nevertheless in some form ‘persist despite a flow of personnel across them’.²²⁴

For the purpose of this discussion, I do not describe models from the most to the least ‘egalitarian’ in terms of social complexity, but instead prioritize the history of anthropological thought, to understand how these models of tribal societies came into existence within the discipline. Research on ways of imagining among non-state societies had already been of particular interest to early British structural functionalists. However, in *Tribesmen*, Sahlins pursued a different means of classifying societies and placed equal importance on subsistence practices, ecological adaptation, and degrees of socio-political centralization.

Decades before the term transegalitarian societies was coined to indicate complex hunter-gatherer societies and more or less sedentary tribes by ethnoarchaeologists,²²⁵ Sahlins suggested that although most tribal societies are post-Neolithic – meaning that they are farmers and herders – not necessarily all are.²²⁶ Within his tribal examples, Sahlins included the sedentary

²¹⁷ Anderson 2006 [1983].

²¹⁸ Sahlins 1968; Barth 1969.

²¹⁹ Anderson 2006 [1983].

²²⁰ Anderson 2006 [1983], 6.

²²¹ Sahlins 1968.

²²² Anderson 2006 [1983], 6.

²²³ Anderson 2006 [1983], 6–7.

²²⁴ Barth 1969, 1.

²²⁵ Hayden 1995; Hayden 2001; Hayden 2011; Hayden 2014; Hayden 2018.

²²⁶ Sahlins 1968, 3.

Kwakwaka'wakw, a complex hunter-gatherer society and language group residing on coastal river mouths and island shores of the Pacific Northwest Coast. Through this famous example, he argued that tribes could also exist among sedentary hunter-fisher-gatherer communities in rich ecological niches. Hayden and Sahlins agree on this matter; however, the key difference between Hayden's understanding of transegalitarian societies and Sahlins's understanding of tribal societies concerns ritual and the individual. While Hayden understood ritual as the main institutionalized point of departure between the rich and poor within a community (through ritual feasting or the establishment of ritual societies),²²⁷ Sahlins understood ritual as one of the main instruments (apart from kinship and economics) in seeking peace and coherence within a tribal society.²²⁸ Hayden's understanding of ritual fits his interpretation of becoming transegalitarian – he understands that tribes (like nation states) are built from the top down, as the more powerful act in their self-interest and succeed in accumulating more wealth and power than other members of a community. He argues that this is the 'Darwinian imperative for survival'.²²⁹ By contrast, Sahlins emphasized that tribal forms are not built top-down – unlike nation states – but from the bottom up: thus *segmentation* is the key feature of households' integration into a tribal constellation:

'Families are joined in local lineages, lineages in village communities, villages in regional confederacies, the latter making up the tribe or 'people' – itself set in a wider, inter-tribal field ... the tribe as a whole is identified and distinguished from others by certain commonalities of custom and speech ... the smallest units, such as households, are segments of more inclusive units, such as lineages, the lineages in turn segments of larger groups, and so on, like a pyramid of building blocks. We speak of 'segmentary system' not simply because it is built of compounded segments, but also because it is *only* so built: its coherence is not maintained from the above by public political institutions (as by a sovereign authority).'²³⁰

In this perspective, each segment (e.g. a household, a village, a tribal territory) reproduces itself through repetition of the same reproductive practices as every other unit. These units are politically largely autonomous, although economic transactions commonly cut across these politically quasi-autonomous units. However, the last part of Sahlins's argument, that no public political institutions govern compounded tribal segments, does not hold merit. For example, among the Kwakwaka'wakw and other native Northwest Coast peoples the potlatch system is one among such institutions. Potlatch was a well-developed system for expressing laws, obligations, and social positions and relations in a broad sense. Potlatch as an institution was highly public and highly political. Via intermarriage, especially, Northwest Coast elites structured inter-community exchange and alliances that transected the segmentary nature of household/lineage units within an ethnolinguistic community.²³¹

Segmentary organization²³² within tribes was elaborated through ethnographic examples by British social anthropologists such as Radcliffe-Brown, Evans-Pritchard, and Fortes. These scholars linked segmentation with kinship analysis of *segmentary lineage systems*, a model of acephalous tribal society inferred from semi-sedentary horticultural and cattle herding groups

²²⁷ Hayden 2018.

²²⁸ Sahlins 1968, 12.

²²⁹ Hayden 2014, 14.

²³⁰ Sahlins 1968, 15.

²³¹ Boas 1888; Barnett 1938; Kan 1989; Jonaitis 1991; Harkin 2015; High 2018.

²³² The concept of segmentary organization, emphasized by Sahlins as the common denominator for all tribal societies, was originally developed by Émile Durkheim in the late 19th century (Durkheim 1968 [1893]).

in sub-Saharan Africa,²³³ and later extended to North Africa²³⁴ and southwestern Asia.²³⁵ Today, it is generally accepted that ‘pure segmentary lineage systems do not exist in behavioural reality’.²³⁶ However, the claim that segmentary lineage is only an etic²³⁷ cognitive tool²³⁸ is not appropriate either, since segmentary logic in some form existed as an emic concept.²³⁹ As with any other hegemonic ideology, segmentary lineage systems cannot be perfectly translated into practice. Further, segmentary systems may be seen as either coexisting, or as not coexisting, together with lineages.²⁴⁰ The allegedly unavoidable connection between these two factors was shown by French scholars²⁴¹ not to be as important as earlier British theorists²⁴² had thought them in the mid-20th century.²⁴³

II.1.1. Segmentary (Lineage) System: We May or May Not Have a Common Ancestor

Initially, the segmentary lineage system was perceived as the only structural and socio-economically ‘egalitarian’, acephalous, non-state constellation, a conception that has been challenged ever since.²⁴⁴ Evans-Pritchard inferred this model of social organization from participant observation among semi-sedentary groups of Nuer²⁴⁵ living along the White Nile in what is now South Sudan.²⁴⁶ The Nuer, unlike other tribes described prior to the 1940s, belonged to a single lineage of 200,000 members,²⁴⁷ meaning that all Nuer tribal members could trace their ancestry to a common ancestor. Hence the term segmentary *lineage* system tribes. The Nuer inhabited a tribal territory of approximately 78,000km²,²⁴⁸ covered with swamps and open savannah on both sides of the White Nile and its tributaries.²⁴⁹ Nuerland lacked iron, stone, and wood, but locally available mud, clay, and thornwood were utilized for the production of pottery and the construction of houses.²⁵⁰ The Nuer lacked knowledge

²³³ Evans-Pritchard 1940; Bohannon – Bohannon 1953; Bohannon 1955.

²³⁴ Gellner 2001 [1969].

²³⁵ Tapper 1979; Tapper 1997.

²³⁶ Salzman 1978.

²³⁷ Within socio-cultural anthropology, ‘an emic model is one which explains the ideology or behaviour of members of a culture according to indigenous definitions. An etic model is one which is based on criteria from outside a particular culture. Etic models are held to be universal; emic models are culture-specific ... A commonplace assumption about emic models is that they are ‘discovered’ rather than ‘invented’ by the analyst. However, emic models, like phonemic ones, are ultimately exogenous constructions, formalized by the analyst on the basis of distinctive features present in indigenous usage. They are not in themselves ‘the native model’, though anthropologists often loosely identify them in this way’ (Barnard 2002, 275–277).

²³⁸ Gellner 1996; Kraus 1998.

²³⁹ Conte – Walentowitz 2009.

²⁴⁰ Bonte et al. 1991; Gingrich 1995.

²⁴¹ Such as the authors who contributed to the volume edited by Pierre Bonte, Édouard Conte, Constant Hames, and Abdel Wedoud Ould Cheikh (Bonte et al. 1991).

²⁴² Such as Fortes – Evans-Pritchard 1940; Evans-Pritchard 1940.

²⁴³ For a detailed review (in English) of several important theoretical contributions regarding (non-)lineage tribal systems (published in French) in Bonte et al. 1991, see Gingrich 1995.

²⁴⁴ For the earliest critique of Evans-Pritchard’s theoretical model and description of the Nuer see Richards 1941. For a more recent and systematic critique of segmentary, egalitarian, and patrilineal depiction of the Nuer by Evans-Pritchard see McKinnon 2000. As McKinnon 2000 shows, Evans-Pritchard’s theoretical separation between 1) politico-jural domain, 2) subcultural domestic domain, and 3) supercultural sphere of religion and ritual enabled him to portray the Nuer as egalitarian and patrilineal.

²⁴⁵ The Nuer called themselves *Nath* (Evans-Pritchard 1940, 3) and Nuerland was emically referred to as *cieng Nath* (Evans-Pritchard 1940, 136). The word *cieng* had multiple meanings, such as a homestead, hamlet, village, or tribal section (Evans-Pritchard 1940, 136).

²⁴⁶ Evans-Pritchard 1940.

²⁴⁷ Evans-Pritchard 1940, 110.

²⁴⁸ Evans-Pritchard 1940, 110.

²⁴⁹ The Nuer’s tribal area roughly corresponds to the size of the national territories of Panama or Sierra Leone.

²⁵⁰ Evans-Pritchard 1940, 86.

of smelting, but they acquired spears from Arab merchants, which the Nuer knew how to hammer cold.²⁵¹

The Nuer gradually expanded into the land of the Dinka²⁵² through raiding cattle and iron tools, as well as the integration of new members to the tribe on the boundaries of Nuerland,²⁵³ which demonstrates their continuously shifting territorial as well as genealogical boundaries. Unlike politically centralized and ranked chiefdoms previously documented for the Trobriand Islands, in which chiefs with their coercive power could grant defence over a 'tribal' territory, the Nuer were described as an 'acephalous' tribe with 'ordered anarchy' and an 'egalitarian upbringing', and were 'deeply democratic'.²⁵⁴ Lacking legal institutions and a central, hereditary leader, the Nuer resolved conflicts through the fission and fusion of tribal segments, which was always situational and commonly explained through the famous Bedouin saying 'I against my brothers; my brothers and I against my cousins; my cousins, my brothers, and I against the world'.²⁵⁵ Apart for exceptional cases, in which all Nuer, across the tribal territory, could identify with the same enemy (e.g. the British), the Nuer fought according to a segmentary grammar:

'People can thus selve themselves, and can other others according to context, that is, according to the structural level of the conflict or contest, coalition or cooperation that is at stake at any one given moment ... this, however, is impossible in a system that is not, as the Nuer's was, acephalous, that is, without institutionalized political and territorial power structures and without formal political offices.'²⁵⁶

Among the Nuer, each tribal segment was composed of a dominant lineage, into which membership is granted through 'adoption, cognatic kinship, or kinship fictions'.²⁵⁷ The Nuer tribe, spread over a large area, was the largest political unit for the Nuer. The Nuer tribal territory was further segmented into primary, secondary, and tertiary segments.²⁵⁸ According to Edward E. Evans-Pritchard, these geographical tribal segments did not overlap with genealogical distance as members of different clans coresided within each segment. However, segments could change through processes of fission and fusion in cases of conflict or cooperation between members of the Nuer tribe:

'Any segment sees itself as an independent unit in relation to another segment of the same section, but sees both segments as a unity in relation to another section; and a section which from the point of view of its members comprises opposed segments is seen by members of other sections as an unsegmented unit ... the political system is an equilibrium between opposed tendencies towards fission and fusion, between the tendency of all groups to segment, and the tendency of all groups to combine with segments of the same order.'²⁵⁹

²⁵¹ Evans-Pritchard 1940, 86.

²⁵² Leinhardt 1958.

²⁵³ Evans-Pritchard 1940, 7, 120, 125–127, 162.

²⁵⁴ Evans-Pritchard 1940, 181. See McKinnon, who argues that Evans-Pritchard glossed over 'his acknowledgement of the hierarchical implications of affinal and matrilineal relations' (McKinnon 2000, 62) for the sake of portraying the Nuer as egalitarian. Evans-Pritchard in his interpretations of the Nuer applied his own cultural distinctions between secular and sacred, political and ritual. Therefore, he among the Nuer considered secular, political power (rather than religious power) as 'true' and 'real' one (McKinnon 2000).

²⁵⁵ Barth 1974, 13.

²⁵⁶ Baumann 2006, 23.

²⁵⁷ Evans-Pritchard 1940, 228.

²⁵⁸ Evans-Pritchard 1940, 138. The Nuer used only one term – *cieng* – to refer to a territorial section of any size (McKinnon 2000, 43). *Cieng* literary meant 'home' or 'community' (Kiggen 1948, 57; Evans-Pritchard 1951, 3 cited in McKinnon 2000, 47).

²⁵⁹ Evans-Pritchard 1940, 147–148.

The smallest, tertiary Nuer segment was comprised of a number of Nuer villages, which served as the smallest political unit in Nuerland.²⁶⁰ Village members shared communal grazing and cultivating rights but each household owned its own stock of cattle, oxen, sheep, and goats.²⁶¹ Nuer subsistence was primarily based on cattle herding and horticulture with a wooden hoe,²⁶² including the biannual harvest of millet and the annual harvest of maize, beans, and tobacco.²⁶³ Among the Nuer, cattle represented the main item of bridewealth transaction, in which a few heads of cattle were given from the groom's to the bride's family.²⁶⁴ For this reason, cattle were never slaughtered solely for consumption and therefore commonly reached old age.²⁶⁵ Oxen and sheep, however, were frequently sacrificed at ceremonies (e.g. weddings and initiation rites).²⁶⁶ In exceptional cases, such as severe famine and droughts, the Nuer would slaughter their cattle, but under regular conditions they only consumed the meat of an animal that had died of natural causes.²⁶⁷ The Nuer also hunted wild animals for subsistence buffering, although game, in general, was of minimal importance.²⁶⁸ Internally, the Nuer distinguished between members of different clans along with age sets, which were established permanently following an initiation.²⁶⁹ Only towards outsiders did the Nuer tribe, as a whole, act as an undifferentiated political and territorial unit.²⁷⁰

The Tiv, a largely sedentary tribal group of 900,000 scattered across numerous horticultural villages along the Benue River in northern Nigeria, is another group among whom a segmentary lineage system was documented.²⁷¹ Like the Nuer, the Tiv belonged to a single lineage, without institutionalized leadership. The combination of segmented social organization, harsh ecological conditions and the absence of political leaders – and therefore largely unsettled relations with neighbours – can be best illustrated through the Tiv's emic perspective on fluid tribal boundaries: 'we don't have a boundary; we have an argument.'²⁷² The same principle was also documented among the Pashtun, a tribal group in what is now Afghanistan and Pakistan,²⁷³ the largest segmentary lineage system documented ethnographically. This is important for two reasons. First, it demonstrates that the segmentary lineage system is not solely an African phenomenon. Second, Pashtuns, like the Nuer and Tiv, inhabited unfavourable, rather dry environments, in which animal herding was of key importance for marriage transactions but less so for daily subsistence, whereas horticulture played a minor role in marriage transactions but was key to daily subsistence.

Similarities in ecology and the predominant subsistence forms between the Nuer and the Tiv led Sahlins to claim that segmentary lineage systems can be found only among societies

²⁶⁰ Evans-Pritchard 1940, 5. Again, there was no emic concept as a 'tertiary tribal unit' among the Nuer (McKinnon 2000, 43).

²⁶¹ Evans-Pritchard 1940.

²⁶² Evans-Pritchard 1940, 86.

²⁶³ Evans-Pritchard 1940, 87.

²⁶⁴ Evans-Pritchard 1940, 17. Cattle was also an important item for 'childwealth' transactions through which Nuer men would secure patrilineal affiliation of their children (Gough 1971, 91). This implies that patrilineal affiliation among the Nuer was not acquired by birth but achieved through ritual and economic wealth (McKinnon 2000, 61).

²⁶⁵ Evans-Pritchard 1940, 26.

²⁶⁶ The Nuer term *buth* literary means 'to share' sacrificial meat (Evans-Pritchard 1956, 287 cited in McKinnon 2000, 47).

²⁶⁷ Evans-Pritchard 1940, 26–27.

²⁶⁸ Evans-Pritchard 1940, 72–73.

²⁶⁹ Evans-Pritchard 1940, 221.

²⁷⁰ Evans-Pritchard 1940, 4.

²⁷¹ Bohannan – Bohannan 1953; Bohannan 1954. It has already been noted that Evans-Pritchard's 'segmentary lineage system' model of socio-political organization is 'a brilliant theory that applied well to many other societies but not to the one which it was conceived' (Southall 1986, 17 cited in McKinnon 2000, 36).

²⁷² Bohannan 1954, 45 cited in Sahlins 1961, 337.

²⁷³ Tapper 1983.

characterized by the use of limited resources over a long period,²⁷⁴ although some scholars later disagreed.²⁷⁵ Writing from the perspective of the ‘predators’ (the Nuer), Sahlins argued that segmentary lineage is based on ‘predatory expansion’²⁷⁶ of one tribal group to the detriment of the other, since it develops in a predatory group that intrudes into a territory already occupied by other groups (e.g. the Nuer’s expansion into Dinka territory). In turn, writing from the perspective of the victims of state invasion, Scott, in *The Art of Not Being Governed*, claimed that in Zomia, a segmentary lineage system developed as a ‘secondary adaptation’,²⁷⁷ which allowed the segmentation of small groups but also their alliance through genealogy for trade among themselves and war against the state. The opposing viewpoints of Sahlins and Scott further demonstrate how the development of a segmentary lineage system is situational, and not limited to arid and dry areas. It appears to develop among both tribes who are oppressing or expanding as well as oppressed or shrinking tribal constellations, depending on the local context and the power of the ‘other’ (e.g. a segmentary lineage system tribe against the state in the case of Zomia; and a segmentary lineage tribe against the Dinka, another acephalous tribal group, in the case of the Nuer).

Although the segmentary lineage system continues to be treated as a type of acephalous, segmentary society, the segmentary organization in situ has rarely been recorded through empirical ethnographic cases.²⁷⁸ Since the 1940s, anthropologists working in the Middle East have shown that segmentary tribes can also exist without lineages,²⁷⁹ and therefore, we shall understand the segmentary lineage system tribes as including those with and those without lineages, in which members within tribal segments are not necessarily equal in status to one another.²⁸⁰

In the case of segmentary lineage tribes with lineages, such as the Nuer, the lineage ideology linked different segments into a political body through imagined ancestral lines (see Fig. 4). In practice, however, a group as a whole rarely fused into a single political unit or functioned internally precisely in accordance with the segmentary grammar.²⁸¹ This must be the case among all members of the tribe, regardless of the number of its members and despite the limiting capacities of maintaining memory based solely on oral tradition in non-literate societies. Against these odds, the claim of a common ancestor is, in fact, also a fictitious, imaginary process.

For example, at the time of Evans-Pritchard’s fieldwork, the Nuer had a fixed capacity to trace their ancestry back between ten and twelve generations, however, ‘there is no reason to suppose that the Nuer came into existence ten to twelve generations ago.’²⁸² After going back five generations, members of the Nuer tribe – and therefore, of any segmentary lineage system groups – needed to navigate their memory through what Evans-Pritchard called *structural amnesia*.²⁸³ This structural amnesia allowed some ancestors to disappear from memory in order to sustain a unified lineage system in which, across different generations, only ten to

²⁷⁴ Sahlins 1961.

²⁷⁵ E.g. Kelly 1983.

²⁷⁶ Sahlins 1961, 332.

²⁷⁷ Scott 2009, x.

²⁷⁸ For a critical overview and ethnocentric interpretations of the Nuer segmentary lineage system, see McKinnon 2000.

²⁷⁹ Bonte et al. 1991; Dresch – Haykel 1995; Gingrich 1995.

²⁸⁰ McKinnon 2000.

²⁸¹ As McKinnon (2000, 75) argues, it is Evans-Pritchard’s and other theorists’ ‘simple’ models that did not capture the complexities of the Nuer social lives. Instead of searching for explanations among the Nuer, theorists rather found conceptual relief in their own cultural understandings. As she puts it ‘The Nuer were not confused. The analysts were: they became tangled in paradoxes of their own making when ill-fitting analytic categories were imposed on a set of categories whose logic and dynamic resisted their own’ (McKinnon 2000, 76).

²⁸² Evans-Pritchard 1940, 199.

²⁸³ Evans-Pritchard 1940.

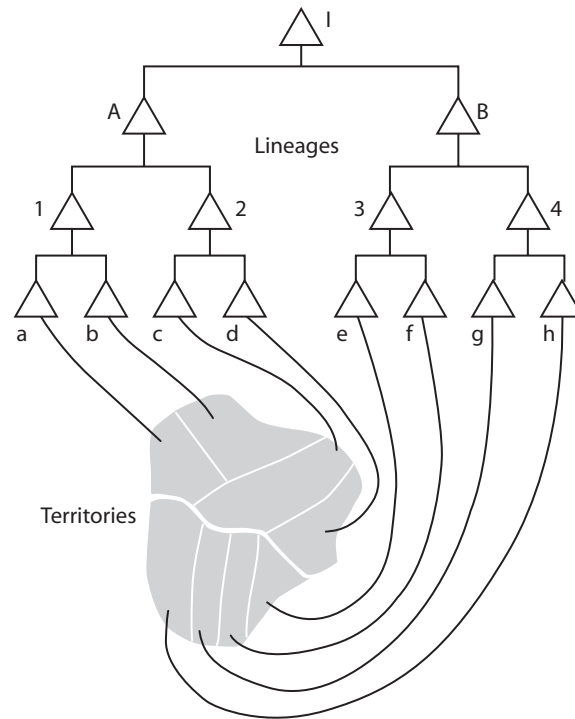


Fig. 4 An ideal genealogical and territorial structure of the segmentary lineage system tribes with lineages (Sahlins 1968, fig. 4.1)

twelve generations stand between the present and the past, which linked all the members of a segmentary lineage system with a founding ancestor.

The flexible dynamics of genealogy within segmentary lineage systems have also been observed in the arid regions of southern Arabia.²⁸⁴ Therefore, the segmentary lineage system that British scholars proposed in the mid-20th century was only possible through a continuous combination of remembering, forgetting, and manipulating people's genealogical history, which must be synchronized with the group's tribal genealogy.²⁸⁵ Although anthropologists have observed these processes from etic perspectives, they were emic ideologies to some extent, common to all segmentary tribal constellations with lineages. However, the extent to which the model applied to the Nuer is questionable.²⁸⁶ Therefore, rather than reopening a long-standing dispute over segmentary lineage systems being either an emic or an etic category, it is important here to state my agreement with Conte and Walentowitz,²⁸⁷ who argued that they are both.

From the presentist perspective, several tribes in the Middle East could be classified as based on segmentary (lineage) systems,²⁸⁸ including those in Yemen,²⁸⁹ which, in fact, exist without lineages, similar to the Hopi, a Native American tribe in northeastern Arizona.²⁹⁰ In these cases, segmentary tribal logic and rather 'egalitarian' relations between tribal subgroups (e.g. households) – previously assigned to segmentary systems with lineages – existed despite

²⁸⁴ Dostal 1983b, 19.

²⁸⁵ As well as by continuously drawing theoretical separations between domestic, political, and religious spheres of social lives (McKinnon 2000).

²⁸⁶ McKinnon 2000.

²⁸⁷ Conte – Walentowitz 2009.

²⁸⁸ Bonte et al. 1991.

²⁸⁹ Dresch – Haykel 1995.

²⁹⁰ Whiteley 1985; Whiteley 1986.

	Segmentary (Lineage System) Tribes	
	Segmentary Lineage Systems Tribes <i>with</i> Lineages (African Model) (Evans-Pritchard 1940; Fortes – Evans-Pritchard 1940)	Segmentary Tribes <i>without</i> Lineages (Middle Eastern Model) (Bonte et al. 1991; Dresch – Haykel 1995; Gingrich 1995; Conte – Walentowitz 2009)
Genealogies	Long genealogies (remember 10–12 generations) Trace their ancestry from a common ancestor – the existence of lineages	Shallow genealogies (remember 2–5 generations) Do not trace their ancestry from a common ancestor – no lineages
Mobility and type of farming	More or less mobile due to shifting horticulture with a digging stick or pastoralism	More or less sedentary due to (irrigation) agriculture in terraced fields
Relations between sub-groups	Acephalous, segmentary society with egalitarian relations between sub-groups (e.g., households, segments, villages, etc.)	
Segmentary logic	Segmentary logic is not an everyday reality but used in cases of disputes and warfare	

Tab. 2 (Un)shared characteristics of segmentary (lineage system) tribes with and without lineages
(after Bonte et al. 1991; Dresch – Haykel 1995; Gingrich 1995; Conte – Walentowitz 2009)

not having a lineage system. Compared to tribes with lineage systems and long genealogies, tribes in the Middle East were based on shallow genealogies, not tracing a group's ancestry from a single, common ancestor. This key difference in kinship structure also coincides with the predominant subsistence practices. Whereas the African examples of segmentary lineage system tribes with long genealogies mainly consisted of more or less mobile societies practising shifting horticulture with a digging stick or pastoralism, the Middle Eastern examples without genealogies mainly comprised more or less sedentary tribes practising sedentary agriculture in irrigated terraced fields. Both types, however, can be classified as two families of examples of acephalous, segmentary non-state societies with 'egalitarian' relations between subgroups, yet inegalitarian relations within these subgroups. In both cases, the segmentary logic is not an everyday principle, yet it can be used as a principle in times of dispute (over land, marriage, etc.) or warfare within the tribe or when fighting a common external enemy (see Tab. 2).

II.1.2. Big Man Societies: We Mobilize Wealth for Personal Networks and Collective Projects

The second group of ideal types of tribal political organization applicable to sedentary non-state societies is the *big man* constellation. This model of social organization was initially inferred from research concerning Melanesian types of political leadership compared to Polynesian chiefs.²⁹¹ According to the *International Encyclopedia of the Social and Behavioral Sciences*, the '*big man*' has come to stand for a type of polity distinguished, for example, from political systems with formally elected offices or inherited ranks and statuses. It is closely associated with, although not limited to, the ethnography of Melanesia'.²⁹² These so-called big man societies are, on the one hand, acephalous, like segmentary lineage systems: however, big man tribes do not follow strict descent rules from a single ancestor. Instead, tribal alliances maintained through competitive ceremonial exchanges of the potlatch type are prioritized over descent. These exchange networks are established and maintained by the unequal exchange

²⁹¹ Sahlins 1963.

²⁹² Lederman 2015, 567.

of women for things (a bride for a pig or shells), preferably far from home, to establish far-reaching exchange networks based on transactions involving customary valuables.²⁹³

Big man societies were originally inferred from Melanesian sedentary, horticultural communities, which base their domestic economies on tubers (taro and sweet potato) and pig breeding.²⁹⁴ Their domestic economies, however, were not narrowly ‘domestic’, but were also of regional importance for the building and maintenance of alliances beyond the household. In *Pigs for the Ancestors*²⁹⁵ Roy Rappaport discussed the key importance of pig breeding for the maintenance of regional peace and occasional warfare, as well as the ritual importance of pigs for repaying debts to their ancestors who lived on the same territory. Importantly, Rappaport also noted that ‘the Tsembaga almost never kill domestic pigs outside of ritual contexts’,²⁹⁶ which bears similarities to practices also widely observed among the Nuer segmentary lineage tribe.²⁹⁷ During the communal slaughter of pigs, which, among the Tsembaga, on average occurred every 2–3 years, the Tsembaga slaughtered only adult and adolescent pigs, whereas the juveniles were left alive.²⁹⁸

In big man societies, both tubers and pigs (owned by individual households) provided the means for maintaining large personal networks of exchange partnerships, built through ‘periodic exchange festivals of different scales and degrees of social and political complexity’.²⁹⁹ The interdependence and contradiction between female labour involved in horticulture and pig breeding versus male gain in prestige through hosting exchange festivals enabled men to organize themselves in larger cooperative groups. However, a big man’s personal prestige did not translate into political office.

‘Big men make their names not simply by mobilizing wealth for personal network ends – like staging impressive funerary wealth distributions and generously supporting their exchange partners when the latter stage events – but also by successfully orienting their own and their clansmen’s respective network to collective projects.’³⁰⁰

With reference to economic behaviour, ‘the big man societies of Melanesia are intriguingly anomalous’.³⁰¹ These societies do not conform to a simple evolutionary socio-economic model, e.g. ‘less economically productive societies characterized by limited social differentiation and political decentralization tend to give way, over time, to more productive types characterized by elaborate divisions of labour and centralized, hierarchical political system’.³⁰²

Despite universal access to land (which among big man societies is tied to a household and inherited by men) and a surplus of pigs and tubers (based on horticultural means of production using ‘Stone Age’ technology), Melanesian big man societies did not establish central political offices or decision-making councils, but turned their surpluses into a material reflection of personal prestige, linked to a few big men:

‘Indicative quality of big-man authority is everywhere the same: it is *personal* power. Big men do not come to office; they do not succeed to, nor are they installed in, existing positions of leadership over political groups. The attainment of big-man status is rather the outcome of a series of acts which elevate a person above the common herd and

²⁹³ Lederman 2015.

²⁹⁴ Rappaport 2000 [1968].

²⁹⁵ Rappaport 2000 [1968].

²⁹⁶ Rappaport 2000 [1968], 22.

²⁹⁷ Evans-Pritchard 1940, 26.

²⁹⁸ Rappaport 1967; Rappaport 2000 [1968].

²⁹⁹ Lederman 2015, 567.

³⁰⁰ Lederman 2015, 568.

³⁰¹ Lederman 2015, 568.

³⁰² Lederman 2015, 568.

attract about him a coterie of loyal, lesser men. It is not accurate to speak of ‘big-men’ as a political title ... the phrase might be ‘man of importance’ or ‘man of renown’, ‘generous rich-man’, or ‘centre-man’, as well as ‘big-man’.³⁰³

In comparison to the rich anthropological literature on big man societies,³⁰⁴ archaeological literature on big man societies remains rather scarce, except for a few publications on ritual feasting and the emergence of social inequality among complex sedentary hunter-gatherer societies.³⁰⁵ Therefore, in the encyclopaedic entry on *Big Man*, *Anthropology of*, it was proposed that

‘Contemporary anthropological archaeologists may be persuaded to draw on that literature as an exceptionally well-developed source of insights into the workings of decentralized political systems, on which to model their interpretations of the material evidence of past sociopolitical and exchange systems.’³⁰⁶

I follow this call³⁰⁷ and treat the existing literature on big man societies as one of the possible non-state ideal types of social organization, which awaits scrutiny against the archaeological data from EBA 1/2 in the Aegean basin.

To draw an example from the ethnographic literature, I have chosen a representative and well-studied case of a big man society: the Siuai, a Motuna-speaking people, who, at the time of ethnographic observation in the 1930s, inhabited the fertile hinterlands of Bougainville Island (Solomon Islands), with a population of 4658 in October 1938.³⁰⁸ The Siuai resided in villages close to streams, on land cleared from the rainforest.³⁰⁹ For subsistence, the Siuai mainly relied on taro and sweet potatoes, and, to a lesser extent, on plantains, yams, coconuts, and areca-nut palms.³¹⁰ Among domestic animals, pig breeding was the main occupation. Each household owned at least one pig, and on average, three or four.³¹¹ Horticulture and pig breeding were female domains, whereas men engaged in hunting wild pigs, tree-rats, flying foxes, flying mice, and birds. What cattle represented for the Nuer, pigs did for the Siuai: the pork was seldom consumed within a household and pigs were not slaughtered for regular domestic consumption except at ceremonies (e.g. at births and christenings, at marriages, at death).³¹² Pigs were, therefore, left alive for a long time and played a key role in regional exchange for other desired goods.³¹³ The desire for pork was satisfied by male hunting of wild boar.³¹⁴ Men also searched for fish and eels, while women and girls collected prawns from the shores.³¹⁵ Most of the hunts were occasional but Siuai men also participated in cooperative fish drives, involving up to 80 men.³¹⁶ Oliver reports that among Siuai, a *household* was:

‘The principal residential and subsistence unit. Members sleep together in their own house and preserve a high degree of privacy. Most households also act separately to pro-

³⁰³ Sahlins 1963, 289.

³⁰⁴ Oliver 1955; Sahlins 1963; Godelier 1991; Lederman 2015.

³⁰⁵ Hayden 1995; Hayden 2011; Hayden 2014; Hayden 2018.

³⁰⁶ Lederman 2015, 572.

³⁰⁷ I will return to these models of social organization in Chapters VI, VII and VIII to scrutinize their compatibility with the archaeological data.

³⁰⁸ Oliver 1955, 9.

³⁰⁹ Oliver 1955, 8–9.

³¹⁰ Oliver 1955, 8–30.

³¹¹ Oliver 1955, 32.

³¹² Oliver 1955, 43–45, 348.

³¹³ Oliver 1955, 348–349.

³¹⁴ Oliver 1955, 31.

³¹⁵ Oliver 1955, 31.

³¹⁶ Oliver 1955, 31–32.

duce and consume their own food and many other basic economic essentials ... in other words, households correspond to *nuclear family*, at some stage or other in its cyclical development ... from the standpoint of the individual, the family-household is far and away the most influential kind of group in his life; in it most of his biological needs are satisfied and his personality largely shaped.³¹⁷

Among Siuai Motuna speakers, the shared language was not a basis for tribal organization. Instead, Oliver reported that ‘Siuai do not act together to utilize land; nor as far as I know did they ever fight together to defend tribal borders. In fact, among the natives themselves there is a fuzziness about the boundaries of Siuai.’³¹⁸ He reports that the members from ‘border villages’ marry each other and are bilingual, and apart from belonging to a household, a hamlet, a work team, a men’s society, and a village, Siuai also maintain trade partnerships and political alliances with people outside these groups.³¹⁹ The importance of feasting and consequently, the emergence of a big man, was described in detail by Oliver:

‘Siuai males also associate to prepare feasts, and by frequent repetition of such events the participants develop customary ways of interacting and some consciousness of group unity. Spatial contiguity is one basis for membership in this kind of unit, but such a unit is more than an aggregation of males who happen to be neighbours; it is an organized group, a hierarchy of leader and followers. Unlike many men’s societies in Melanesia, this one requires no formal initiation; as soon as a boy leaves women’s company and begins to frequent club-houses and participate in activities there, he is accepted as a member. Male exclusiveness is emphasized in many ways; for example, the club-house demon kills any female who goes too near.

Leadership in a men’s society depends upon an individual’s ability to mobilize his relatives, friends, and neighbours to help him give feasts. In this fashion the leader establishes and reinforces his *effective authority* over members of his men’s society and at the same time acquires public renown (potu) through his largesse. In former days leadership in a men’s society probably also depended upon the leader’s ability to organize and conduct raids, but now the emphasis is on feasts.

The leader has certain rights and obligations. His house is frequently larger than average, but his diet is no better. He is relieved of the onerous tasks of climbing palms and carrying heavy burdens, but he continues to work in his garden. He is treated with respect and deference wherever he goes, but in return must be a generous host. He frequently calls upon his followers to labour for him, but should repay their efforts with pork meals. Nowadays, he has no armed force to back up his orders, but he can control the opinions of most of his followers and thereby make life fairly unpleasant for a disobedient one. And, on top of all this, he has some supernatural sanction for his position.³²⁰

Like Oliver, Sahlins understood that a big man’s political power is not inherited but achieved, and only extended beyond his household to a certain limit, he also recognized empirical differences between big man constellations in the lowlands and those in the highlands of Melanesia.³²¹ As the achieved status of the big man could not be handed over to his son, men from different households continued to participate in the competition for achieved status, mobilizing their wealth through immediate members of their respective households. If this practice were to be translated to the archaeological record, then it would correspond to the local and regional setting where one of the staple goods, be it pigs or other household-raised items,

³¹⁷ Oliver 1955, 104–105.

³¹⁸ Oliver 1955, 103.

³¹⁹ Oliver 1955, 104.

³²⁰ Oliver 1955, 105–106.

³²¹ Sahlins 1963.

would serve as a means not only of subsistence but also of competition between households. This setting would not contain one household that was continuously privileged over several succeeding settlements or use phases but multiple households in different settlement phases on a local and regional scale.

Fully developed Siuai big man societies, residing on rich alluvial plains, seemed to operate differently from those in the New Guinean highlands. Reducing a key difference in varying degrees of big man-ship between the two groups to environmental differences (e.g. rich alluvial plains versus harsher, hilly terrain in the highlands), Sahlins ascribed a segmentary lineage system organization to the New Guinean highlands, which seemingly limited much of the political authority that could be ascribed to any big man in the highlands.³²² However, this interpretation was later significantly modified, which paved the way for a new model of non-state, sedentary tribal constellation: the so-called great man society.

II.1.3. Great Man Societies: The Accumulation of Personal Prestige Determines our Reproduction

In the 1980s, Maurice Godelier showed that two models of political organization coexisted within the highlands of Papua New Guinea, namely big man (e.g. Mae-Enga, Kayka Melpa, Mendi)³²³ and great man societies (Baruya),³²⁴ the latter being inferred from extensive fieldwork among the Baruya.³²⁵ This research enriched the ‘ideal typology’ within socio-cultural anthropology for non-state societies, and refuted the assumption that a segmentary lineage system was the only possible way of maintaining a relatively acephalous tribe, in addition highlighting the issue of gender in non-state tribal constellations. The Baruya were an acephalous tribe of approximately 2200 members, distributed across 17 villages in the hilly area between two river valleys.³²⁶ The patrilineal tribe was divided into 15 clans, which were associated with a particular territory and a clan’s name.³²⁷ These 15 comprised seven clans of local groups and eight clans of previous migrant groups.³²⁸ Both a clan’s name and its territory were inherited and passed on to the next generations through the male line.³²⁹ Baruya clans were further divided into shallow lineages which were originally also associated with a particular territory, but due to blood feuds, men needed to seek refuge with affinal relatives, which disturbed the ‘one territory – one lineage’ rule. At the time of Godelier’s fieldwork, the Baruya no longer lived in villages in which all men could claim descent from the same patrilineal ancestor.

Based on the study of kinship structure and marriage patterns among the Baruya, Godelier recognized key differences in marriage exchanges between the Baruya and Melanesian societies of the big man type. Whereas big man societies predominantly exchanged persons for things (e.g. a woman was exchanged for bridewealth) and practised so-called *generalized exchange* (including the ritualized, competitive gift exchange of pigs), the Baruya exclusively exchanged a person for a person (e.g. direct sister exchange) – the so-called *direct exchange* of women (and no competitive gift exchange of pigs). This division highlighted the fact that not all Melanesian societies were primarily interested in acquiring things or accumulating wealth, such as was reported for big man societies, since, among the Baruya, accumulation of

³²² Sahlins 1963, 289, n. 9.

³²³ Sahlins 1963; Liep 1991; Lederman 2015.

³²⁴ Godelier 1972; Godelier 1986a; Godelier 1991.

³²⁵ Godelier 1986a; Godelier 1991.

³²⁶ Godelier 1986a, 1.

³²⁷ Godelier 1986a, 4.

³²⁸ Godelier 1986a, 4.

³²⁹ Godelier 1986, 18. Women could only pass on the names to their pigs, commonly resembling names of geographical features. These may include the names of streams and mountains that belong to women’s lineage and mark their ancestors’ territory.

Big Man	Great Man
Competitive ceremonial exchanges Absence of elaborate initiation rituals	Ritual exchanges (non-competitive) Presence of elaborate initiation rituals
Persons exchanged in marriage for things (pigs, shells) Marriage exchange: a woman for bride wealth – <i>generalized exchange</i>	Persons cannot be exchanged in marriage for things Marriage exchange: sister exchange – <i>direct exchange</i>
Material compensation for death	Material compensation cannot compensate for death
Women's productive labor used by big men for the accumulation of wealth and exchange	Women's productive labor used by great men for procreation and the flow of persons

Tab. 3 Differences between big man and great man societies (after Godelier – Strathern 1991)

wealth did not determine their tribe's reproduction. Whereas men in big man societies were dependent on pigs exchanged for a bride, men in the Baruya were not. The distinction between competitive big man and relatively 'egalitarian' great man societies was further elaborated and compared in detail in the edited volume *Big Men and Great Men: Personification of Power in Melanesia*³³⁰ in which scholars meticulously detailed the differences between the two systems (Tab. 3).

Within this edited volume, scholars such as Marilyn Strathern and others emphasized that big man societies cannot be viewed as prototypical *primitive capitalists*³³¹ and instead agreed with Liep that colonialization initiated the process of 'bigmanization'.³³² Godelier highlighted the fact that the compensation of wealth for both the death of a warrior or for a woman is not a Melanesian phenomenon. Therefore, big man societies could well exist beyond this region.³³³ The same should be understood for great man societies, since the direct exchange of women – a practice reported among great man types of societies – is also not unique to Melanesia, and may well have been practised in prehistory as well. However, for theoretical and empirical distinctions between the two systems, Godelier proposed two defining principles, here addressed as a principles a) and b).

- a) 'In societies where the principle of the direct exchange of women dominates the production of kinship relations, one must also encounter systems of male (and sometimes female) initiation calling more upon powers that are inherited or ascribed (ritual powers in particular) rather than merited or achieved.'³³⁴

The initiations among the Baruya and other great man societies in fact served as a mechanism for the integration of its members, as well as a legitimization of hierarchies existing between men and women. Since initiation rituals are largely absent among big man societies, big man societies follow a different principle:

- b) 'When kinship relations are found to depend primarily on the exchange of women for wealth, there should be a development of some system of social integration and forms of male power centered on a sprawling system of competitive exchanges which tie local societies into one regional, intertribal network. These local groups are represented by big men, who symbolize their capacity to produce and/or amass wealth and to redistribute it.'³³⁵

³³⁰ Godelier – Strathern 1991.

³³¹ E.g. Epstein 1968.

³³² Liep 1991.

³³³ Godelier 1991.

³³⁴ Godelier 1991, 278.

³³⁵ Godelier 1991, 277–278.

Among big man societies, differentiated access to wealth can be reflected in the number of pigs and tubers. These are treated as a store of value, but also as having an exchange value – which determines a household's capacity for competitive feasting, the building of alliances, and, consequently, the procurement of foreign objects of higher value and prestige, important to a big man. In stark contrast, among great man societies such as the Baruya, material objects are merely treated as a means of reproduction whereas women's productive labour was used for procreation and the flow of persons.

The Baruya, the best-studied example of a great man society, follow principle a) (or the first principle) in this distinction. Baruya predominantly exchange sisters for marriage, practise male and female initiation, and do not assign importance to achieved status. The Baruya were a patrilineal tribal group in highland Papua New Guinea, of about 2200 people, who primarily based their economies on horticulture by cultivating taro and other tubers, as well as raising pigs for domestic and ritual consumption.³³⁶ Horticulture and pig breeding were inherently female tasks, whereas men contributed to consumption with hunting and the production of salt, which was a more prestigious pursuit than gardening.³³⁷ Salt production was a tribal and regional expertise among the Baruya, who produced it for local and regional consumption. Through the exchange of salt bars, which men in Baruya villages cooperatively produced from locally available plants, the Baruya acquired other things (but not women) from outside.³³⁸

Unlike in big man societies, among the Baruya the status of a man or a household was not dependent on pig breeding. The Baruya slaughtered pigs in two ways: a) *family slaughter*, in which one pig is slaughtered for consumption, and a household gives some parts of the pig meat to close relatives of the husband and wife. This is without ceremonial function and is solely meant for subsistence and the maintenance of peaceful relations with relatives; b) *collective slaughter*, in which a few households kill one or two of their own pigs at the same time, and men take care of the butchering and cooking, which is carried out ceremonially.³³⁹ This differed from big man tribes, where the status of a household depended on the number of pigs raised: therefore pigs were not slaughtered solely for subsistence, but left alive for longer, for the purpose of competitive pig festivals.³⁴⁰ Originally, the Baruya were to some extent immigrants and even refugees, who over a few generations settled with their hosts and thereby established themselves as a new tribe, once they had erected a ceremonial house. This ceremonial house was constructed for politico-religious reasons and for the performance of initiation rituals. A combination of the two – the material (e.g. ceremonial house) and the immaterial (initiation rituals) – in a way held Baruya society together, but also re-enforced the internal distinction between male and female tasks, as well as differences in power, as Baruya women were strictly dominated by Baruya men.³⁴¹

The record of great man societies corresponds to Flannery and Marcus' description of achievement-based societies containing ritual houses.³⁴² Although such houses may be constructed for men or women for successful initiation into the wider community, among the great man societies more specifically, it is important to refer to the uncompromised resistance to any emerging inequality in terms of material wealth. As the accumulation of wealth does not define their household or social organization, great man societies value the achieved status

³³⁶ Godelier 1986a, 4.

³³⁷ Godelier 1986a, 12–14, 96–99, 130–135.

³³⁸ Godelier 1986a, 12.

³³⁹ Godelier 1986a, 14–15.

³⁴⁰ Rappaport 1967; Rappaport 2000 [1968].

³⁴¹ Godelier 1972; Godelier 1986a; Godelier 1991.

³⁴² Flannery – Marcus 2012. For a more detailed description of how to detect ritual houses in prehistory, see Flannery – Marcus 2012, chapter 8.

or personal prestige based on their skills. These may include a great warrior, a great hunter, or a great craftsman, in the case of Baruya, also the person overseeing salt production. These different roles are not accumulated by one person or one household in such socio-political constellations but are acquired by different persons in the local community. Moreover, their importance also differs according to the immediate concerns of the village community and they are not always a conspicuous person in everyday life. Regarding the archaeological record, such a setting would correspond to the evidence of ritual houses that differ from other houses in their household activities, architectural setting, or depositional processes. Regarding the difference between households, the evidence should point towards generalized sharing of goods between households, in which a difference in the amount rather than a type of goods could be evident.

The three models of tribal social organization described above, namely the segmentary lineage system, big man, and great man societies, can generally be classified as acephalous, more or less ‘egalitarian’ tribal constellations. The ‘egalitarian’ dimension was inherent to relations among subgroups (e.g. between households, clans, or subtribes) but it was combined with non-egalitarian relations between generations and among men and women within these subgroups.

On the same note, it is important to recognize that although decentralized tribal constellations are commonly equated with acephalous ‘egalitarian’ units among sedentary societies, any purely ‘egalitarian’ groups are largely non-existent. Instead, we should strive to understand to what extent privileged individuals respect the common good, since ‘social inequality protects the collective interest of primitive communities and is an essential factor in their progress’.³⁴³ In societies without an institutionalized hierarchy and hereditary status, social inequality (apart from differences of age and gender but also artisan skills that could be associated with prestige – see the Baruya description above) has the potential to develop from the conspicuous consumption and usage of rare objects or through gifts, but it remains temporally and contextually limited:

‘In practice, inequality is not created, is not justified ideologically, except through services rendered to a community. It always presupposes, and develops, a form of economic disequilibrium between individuals and groups, a disequilibrium which is transferred into an advantageous social relationship both for the community and the individual who claims to play a ‘central’ role.’³⁴⁴

For that reason, although the primary unit of analysis within this study is the household, it should be acknowledged that even within this unit, individual persons may have had differentiated access to reproductive resources and unequal agency to voice their needs. Moreover, the achieved status or prestige may not be translated into material wealth but only personal prestige, as described for the Baruya above.

Concerning individuals, my work is inspired by the writings of Louis Dumont and Marilyn Strathern, and therefore I prefer to use notions of ‘persons’ and ‘personhood’ instead. The individual – as a concept – was largely a product of the European Enlightenment, which built on its predecessors in Late Antiquity. Anthropologists have recognized this empirically, since persons have largely been pre-defined by the group they belong to (e.g. a household, a clan, a village, order of birth, a house), whereas individuals residing within nation states often claim that they are not. Furthermore, the distinction between individuals and persons is important with regard to the political economy, since ‘the nation is the political group

³⁴³ Godelier 1977, 118.

³⁴⁴ Godelier 1977, 111.

conceived as a collection of individuals',³⁴⁵ whereas all types of tribes are a collection of segments (i.e. households) arranged in either a segmental or a pyramidal way. If we accept that in sedentary societies a person is commonly tied to a household (also in prehistory) then the differences between households, which are the smallest socio-economic unit that can be traced archaeologically, should provide information regarding the extent to which members or persons belonging to particular households worked towards socio-economic equilibrium or disequilibrium.

These three systems described above – big man societies, great man societies, and segmentary (lineage) systems – lack an office of hereditary tribal leader (e.g. a chief), yet there are apparent (aforementioned) differences between them. However, the three models are not the only possible form of tribal integration. At the other end of the wider continuum, anthropologists identified socio-politically centralized chiefdom constellations, which politically and/or economically incorporate a few villages into a unified political unit under a hereditary chief's leadership.

Chiefdoms with and without a Conical Clan Structure

According to *The International Encyclopedia of Anthropology*, chiefdoms today refer to 'political formulations led by chiefs. Chiefdoms usually comprise the population of thousands of inhabitants'³⁴⁶ and need not necessarily rely on a redistributive economy,³⁴⁷ a feature that was heavily emphasized in connection with Polynesian chiefdoms.³⁴⁸ The main distinction between chiefdoms and the more or less acephalous types of social organization is the presence of a hereditary office of chief, 'which can be defined as political representatives usually selected from among hereditary candidates for chiefly office'.³⁴⁹ In *Tribesmen*, Sahlins proposed a more nuanced definition of chiefdoms, which distinguishes a chiefdom from class societies and segmentary lineage tribes:

'A chiefdom is a ranked society. The descent and community groups of a segmentary tribe are equal in principal, but those of a chiefdom are hierarchically arranged, the uppermost officially superior in authority and entitled to a show of difference from the rest. A chiefdom is not a class society ... it is not divided into a ruling stratum in command of the strategic means of production or political coercion and a disenfranchised underclass. It is a structure of degrees of interest rather than conflicts of interest: of graded familial priorities in the control of wealth and styles of life – such that, if all the people are kinsmen and members of society, still some are more members than others. For some are of superior descent.'³⁵⁰

Chiefdoms can be further divided into those with a conical clan structure or *ramage*, such as Easter Island, Hawaii, Managaia, Mangareva, Marquesas, Tikopia, Tonga, and the Societies,³⁵¹ and those without a conical clan and, instead, with unilineal descent groups, including Futuna, Samoa, and Uvea³⁵² among Polynesian cases, as well as the Trobriand chiefdoms in Melanesia.³⁵³

³⁴⁵ Dumont 1980, 317.

³⁴⁶ Skalnić 2018, 815.

³⁴⁷ Earle 1998b; Earle 2002.

³⁴⁸ Service 1962; Sahlins 1963; Sahlins 1968; Service 1971.

³⁴⁹ Skalnić 2018, 815.

³⁵⁰ Sahlins 1968, 24.

³⁵¹ Sahlins 1958, 139, 139–180.

³⁵² Sahlins 1958, 181, 181–197.

³⁵³ Malinowski 1922; Malinowski 1935.

II.1.4. Chiefdoms with a Conical Clan Structure: Our Status and Degree of Membership is Defined by Birth

In the anthropological literature, the term conical clan was initially coined to explain social organization and ideology among the Inca elites.³⁵⁴ Kirchhoff originally defined a conical clan as:

‘A group in which every single member, except brothers or sisters, has a different standing; the concept of the degree of relationships leads to different degrees of membership in the clan. In other words, some are members to a higher degree than the others.’³⁵⁵

The conical clan concept was further elaborated within Polynesian ethnography.³⁵⁶ Sahlins argued that conical kinship structures emerged in areas with dispersed ecological resources, which led to the local specialization of households and therefore a need for redistribution, headed by a chief. Conical clans, like other kinship structures, are not limited to Polynesia but have been independently identified through ethnographic cases in at least five societies;³⁵⁷ for example, as *ramage* among the Tikopia³⁵⁸ and as the *gumsa* principle in the highlands of Burma (Southeast Asia) among the Kachin.³⁵⁹ The entry in the *International Encyclopedia of Social and Behavioral Sciences* summarizes how the difference between the chiefly and commoners’ ranks within a conical clan comes into being:

‘Descent groups are internally differentiated into a high ranked, lineage-like, chiefly or noble descent line, and a lower ranked and internally undifferentiated clan-like category of commoners (Kirchhoff, 1959; Friedman, 1979). Chiefly rank in a conical clan is typically based on relative birth order in present and ancestral generations, so that senior sons or daughters of senior ranking ancestors keep careful track of their pedigrees to validate their noble status. Junior offspring of junior ancestors, on the other hand, have little motivation to remember their genealogies, and their affiliation to the group is more categorical, or clan-like, in character.’³⁶⁰

The conical clan is an inherently different genealogical structure from the segmentary lineage system model described above. In the latter constellation, ‘every member of the clan is, as far as clan membership goes, on an absolutely equal footing with the rest: the nearness of relations to each other or to some ancestor being of no consequence for a person’s place in the clan’.³⁶¹ Therefore, anthropologists commonly referred to these types of tribes as ‘egalitarian’, although generations and relative birth order plays a role within this structure. By contrast, within a conical clan, genealogical proximity to a common ancestor or the so-called seniority within patriline, defines a *degree of membership* in the clan: therefore neither commoners nor the second-born child (unless the first is a girl, in some cases) have any entitlement to take up the chiefly, hereditary office. Lineage types of societies transfer property title and descent only through either the male or the female line. By contrast, most conical clan chiefdoms were patrilineal and therefore prioritized the first-born male for the chiefly office, although, in principle, societies with a conical clan type of social organization tend to prioritize the order of birth over gender.

³⁵⁴ Kirchhoff 1949.

³⁵⁵ Kirchhoff 1955, 6–7.

³⁵⁶ Sahlins 1958.

³⁵⁷ Service 1985.

³⁵⁸ Firth 1959; Firth 1983.

³⁵⁹ Leach 1954.

³⁶⁰ Burnham 2015, 731.

³⁶¹ Kirchhoff 1955, 4.

A tree-like genealogical constellation of chiefdoms with conical clans implies that the person ranking at the top of a conical clan, the chief, is the most closely related to the common ancestor and, consequently, also to the supernatural powers. A chief embodies what Godelier would call a politico-religious function.³⁶² A chief coordinates communal activities such as harvest and ceremonies. Through the former, a chief receives gifts (e.g. taro, yams) and through the latter, he redistributes these back to the commoners, now transformed into food. In each village, a chiefly lineage provides a local, hereditary chief or a local headman (e.g. predominantly local lineage A – chief a, see Fig. 5) who, in some cases, is subordinated to a paramount chief (e.g. Hawaiian chiefdom), or, in the absence of a paramount chief, those local chiefs rank equal to each other and compete between themselves (e.g. Tikopia).³⁶³

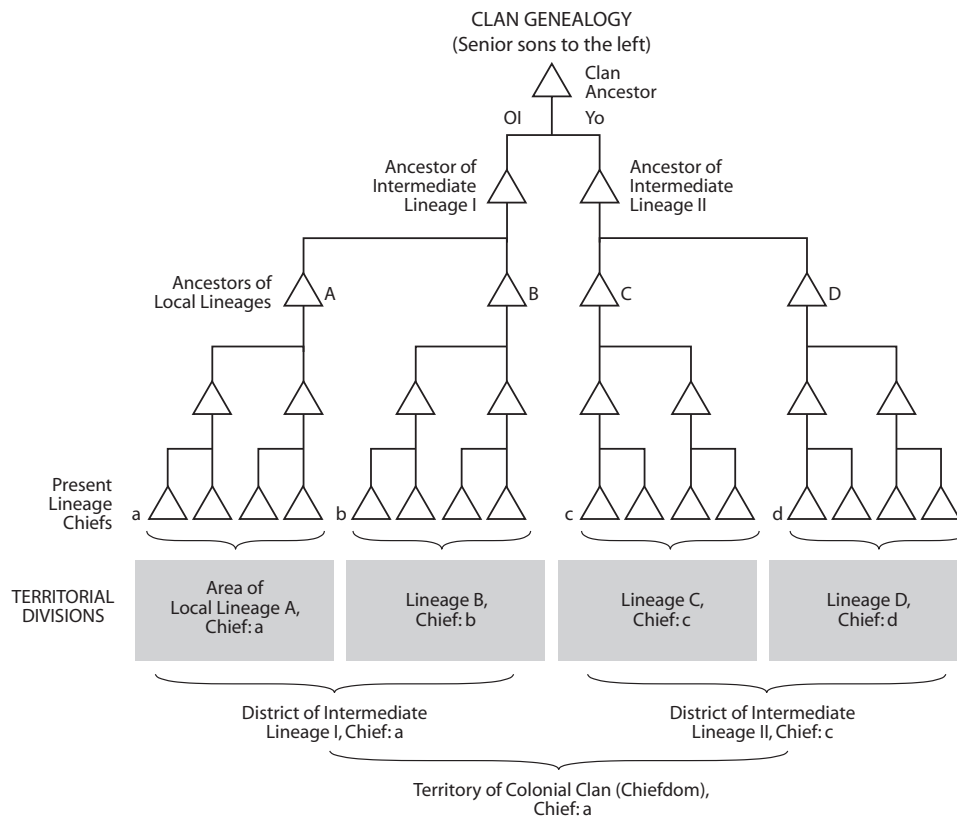


Fig. 5 Ideal genealogical and territorial structure of chiefdoms with a conical clan (Sahlins 1968, fig. 2.2)

Commonly, the largest proportion of daily activities in chiefdoms with a conical clan structure are limited to a particular village or settlement, and even more so within a household. However, the paramount chief has the power to mobilize labour beyond his own household and even residential unit for the construction of large sea-going canoes, extensive irrigation complexes, temples, or an exceptional residence for a paramount chief.³⁶⁴ Like the house-society model of social organization³⁶⁵ in which a house cuts across the endogamous and exogamous kinship ties, 'conical clans are typically neither exogamous nor endogamous. Chiefs are wont to marry close relatives, perhaps within the clan, an arrangement that satisfies their ideas of

³⁶² Godelier 2011.

³⁶³ Sahlins 1958.

³⁶⁴ Sahlins 1958; Service 1962; Sahlins 1968; Earle 1978; Earle 1998b; Earle 2002.

³⁶⁵ Lévi-Strauss 1982.

their nobility and maintains the structure of elitism.³⁶⁶ Unlike in chiefdoms without a conical clan, where the chief accumulates wealth and power primarily through polygynous marriage politics and participation in wide-ranging prestige goods networks³⁶⁷ in a competitive emulation of peer polities,³⁶⁸ descent rather than wealth determines one's position within a conical clan structure, through ascribed status.

A well-documented ethnographic case of a chiefdom social organization with a conical clan is the Tikopia, studied by Raymond Firth. The Tikopia were a small island society of 1200 members, who inhabited an area of 5km².³⁶⁹ Tikopia members were linguistically and culturally homogeneous but geographically divided into two districts, each composed of mostly coastal villages numbering between 50–100 inhabitants.³⁷⁰ The Tikopia's nearest neighbours, the Anuta, were located 70 miles away by sea.³⁷¹ Each important house in Tikopia had a special link to the Anuta, either through friendship or kinship.³⁷² In each Tikopia village, a cluster of households of the same clan predominated numerically and politically, as the local chief originated from one of these houses. Every house or *paito* in Tikopia had a personal name, which was also a lineage name.³⁷³

Regarding subsistence, the Tikopia mainly relied on Stone Age technology, although they had already adopted steel axes and other European goods at the time of ethnographic observation.³⁷⁴ All members of a house worked in the gardens and orchards, where the Tikopia grew taro, coconuts, breadfruit, and bananas. Tikopia primarily relied on starchy foods and the only source of protein intake were hunted birds and fish. While only men were allowed to fish offshore (for which a commoner could borrow a chief's canoe), women collected and trapped seafood in the shallow coastal waters. Apart from cats, which the Tikopia domesticated from those left by white men to protect food and clothes from being eaten by rats, the Tikopia lacked other domestic animals. Although most of the food was produced, prepared and consumed within a household, gift transactions of staple foods between neighbours and kin, as well as gifts from commoners to chiefs, were common practices among the Tikopia (see Fig. 6).

Among the Tikopia the chiefly dwellings were not significantly different from other houses in terms of their construction, nor in the types of items stored within either chiefly or commoner houses.³⁷⁵ Chiefs and the members of their household – which could include several wives and their children – were not detached from production, but cultivated their gardens. Among the Tikopia, 'prestige goods were held by most families and therefore were not insignia of rank'.³⁷⁶ The most marked differences between Tikopia houses related to religious affairs, which created dependency. As Firth noted, 'some are in close relation with important gods, others are dependent upon these for their contact with the higher supranatural powers'.³⁷⁷ To maintain these power relationships, an ideological barrier was imposed on marriage between chiefs and commoners, which shows that strict descent rules, alongside unequal access to

³⁶⁶ Sahlins 1968, 49.

³⁶⁷ Malinowski 1922; Brunton 1975; Friedman – Rowlands 1977.

³⁶⁸ Renfrew 1986.

³⁶⁹ Firth 1983, 21–22.

³⁷⁰ Firth 1959; Firth 1983.

³⁷¹ Firth 1983, 20, 357–358. The sea served as the only form of communication outside Tikopia territory.

³⁷² Firth 1983, 357–358.

³⁷³ Upon Firth's follow-up visit to Tikopia in the 1950s, he noticed that although they had adopted a western approach to the classification of houses (e.g. with a street name and a number) they retained their residential naming system, addressing the house site and its members with the same name (Firth 1959), which demonstrated the persistent importance of conical clan organization among the Tikopia.

³⁷⁴ Firth 1983.

³⁷⁵ Firth 1983, 358–361.

³⁷⁶ Sahlins 1958, 81.

³⁷⁷ Firth 1983, 359.

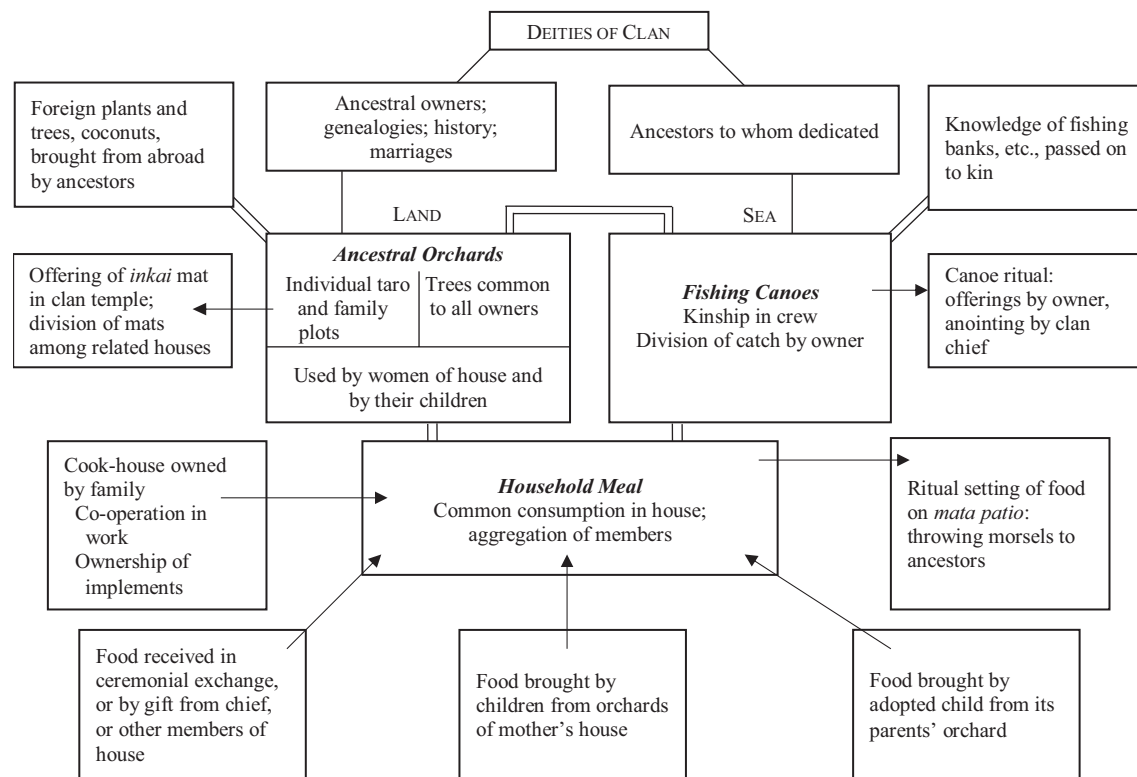


Fig. 6 Food and kinship among the Tikopia (after Firth 1983, tab. II)

supernatural powers, outweighed negligible differences in wealth between the chiefly and commoner ranks among the Tikopia.

In contrast to the Tikopia, Hawaiian chiefdoms with a conical clan structure had a population of 100,000 members scattered across five inhabited islands of different sizes.³⁷⁸ The Hawaiian chiefdom was divided into three ranks – the paramount chief and his principal advisors; local ‘stewards’, who undertook the administrative tasks; and the commoners.³⁷⁹ Despite the three ranks, Hawaiian chiefdoms were divided into two economic classes.³⁸⁰ The two chiefly ranks controlled the construction of irrigation complexes and agricultural production by commoners, whose rights to land depended entirely on chiefs, and the households of the latter depended entirely on commoners for reproduction.³⁸¹ Although Tikopia commoners were equally dependent on chiefs to claim rights to land, unlike the Hawaiian chiefs, the Tikopia chiefs partook in the production of subsistence items.³⁸²

The two different cases highlight possible socio-economic differences between chiefdoms organized in a conical clan.³⁸³ On the one hand, among the Tikopia, the two ranks – the chiefly

³⁷⁸ Sahlins 1958.

³⁷⁹ Sahlins 1958, 13.

³⁸⁰ Earle 1978.

³⁸¹ Earle 1978.

³⁸² Firth 1959; Firth 1983.

³⁸³ The chosen ethnographic examples for displaying the models of chiefdoms with conical clan structure and chiefdoms with unilineal descent groups mostly comprise island societies. Particular to island societies is the presence of environmental circumscription, which may have triggered ecological specialization, warfare and, consequently, the emergence of chiefdoms for the redistribution of goods (although environmental circumscription is not exclusively an island particularity and can also exist in other contexts) (Carneiro 1981; Carneiro 1988; Carneiro 2012). There are two reasons for choosing the Hawaii and Tikopia examples (for chiefdoms with conical clan structure) and the Trobriand Islands (for chiefdoms with unilineal descent groups)

and the commoner rank – did not materialize in subsistence practices, and only recently manifested in the prohibition of marriage between the two ranks. Both ranks were involved in production, and the commoners could claim some kinship links to the chiefly rank since the prohibition of marriage between members of the chiefly and commoner ranks was a recent phenomenon.³⁸⁴ By contrast, Hawaiian chiefdoms comprised three ranks, of which only the upper two ranks – the members of the paramount chief's household and the households of local chiefs – could trace kinship to each other, whereas the commoners were not linked to them by kinship.³⁸⁵ The same division corresponded to the division between the producers and the rulers, and therefore the Hawaiian case clearly supports the claim that 'the alienation of the worker from his product was a general condition long before its notoriety in capitalism'.³⁸⁶

One possible way to achieve the alienation of the worker from his product appears when the elite ideology of kinship excludes or differs entirely from that of the commoners. Therefore, once the kinship links between the chiefs and commoners can no longer be traced, the two initially ideological ranks – previously manifested only through differences in quantity rather than quality (e.g. Tikopia) – then manifest in the quality and quantity (e.g. Hawaii) of reproductive techniques. This includes the possession of prestige goods and involvement in daily productive activities, such as gardening and crafts. However, the differences between Polynesian chiefdoms were already obvious to Firth, who argued that 'the fortune-hunter is not a type in Tikopia society, even to the extent to which he appears to exist in Ontong Java or the Trobriands'.³⁸⁷

II.1.5. Chiefdoms with a Unilineal Descent Structure: Our Chief Inherits, Accumulates, and Distributes

Although Sahlins treated the conical clan as 'the main strategy of chiefdom social organization'³⁸⁸ in Polynesia, he understood that chiefdoms organized in unilineal descent systems without primogeniture could be internally stratified in Indonesia³⁸⁹ and elsewhere.³⁹⁰ A well-documented example of the latter – a chiefdom without a conical clan – can be drawn from the Trobriand Islands, where society was organized in matrilineal descent groups.³⁹¹ These were split into chiefly and commoner ranks based on participation or the lack thereof in

for presentation of these two theoretical models. The first stems from the rich ethnographic descriptions and well-researched cases alongside the achieved anthropological excellence in modelling these societies. The second reason for choosing these island examples stems from the empirical archaeological data used in this study. The Aegean basin not only comprises land on each side of the Aegean Sea, where Platia Magoula Zarkou and Çukuriçi Höyük are located, but also the Cycladic Islands and other smaller islands between the Balkan and Anatolian peninsulas. These islands were already colonized during the EBA, and given that obsidian from the Cycladic island of Melos reached both Çukuriçi Höyük and Platia Magoula Zarkou during the Neolithic and the Bronze Age, it is evident that dwellers on each side of the Aegean Sea in some way depended on or interacted with the dwellers on these island sites. Therefore, the incorporation of ethnographic examples of island sites corresponds to the empirical data in a wider, regional sense. It should be understood, however, that the ideal type of a chiefdom with conical clan organization or a chiefdom with unilineal descent is by no means confined to islands. The ethnographic cases such as the *gumsa* principle among the Kachin in highland Burma (Leach 1954) and the Inca conical clan (Kirchhoff 1949; Kirchhoff 1955; Jenkins 2001) are representative examples of societies with a conical clan structure existing on the 'mainland', in contrast to the island examples discussed in more detail in this section.

³⁸⁴ Firth 1983.

³⁸⁵ Sahlins 1958.

³⁸⁶ Graeber – Sahlins 2017, 16.

³⁸⁷ Firth 1983, 373.

³⁸⁸ Sahlins 1968, 49.

³⁸⁹ Sahlins 1958.

³⁹⁰ Malinowski 1922.

³⁹¹ Malinowski 1922; Malinowski 1929; Malinowski 1935.

the long-distance exchange of prestige objects by local Trobriand Islands chiefs from which commoners were excluded.³⁹² In *kula*, the prestige objects were exchanged over long distances in multiple directions. The spondylus shell necklaces were exchanged in a clockwise direction, white corus shells were exchanged in an anti-clockwise direction.³⁹³ These objects were exchanged by seafaring, for which the chief mobilized the commoners to construct the largest canoes with the most magic involved in production as well as during the expedition.³⁹⁴ During Malinowski's fieldwork in Kiriwina on the Trobriand Islands, he described the insignificant yet previously important exchange of boar tusks and greenstone adze axes between local Trobriand chiefs (see Fig. 7).³⁹⁵

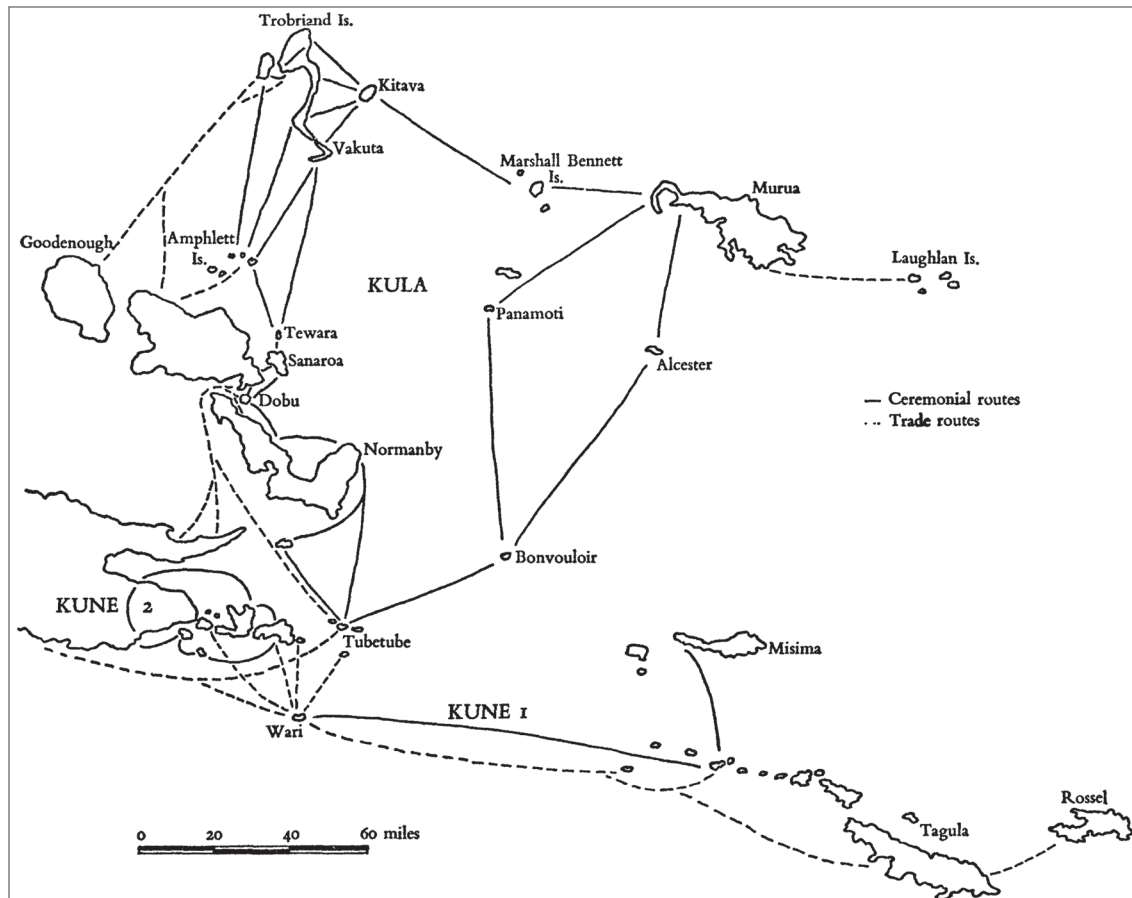


Fig. 7 Reconstruction of ceremonial (*kula*) and non-ceremonial exchange routes between the Trobriand Islands (Brunton 1975, fig. 1)

Writing from the Omarakana perspective, the 'capital village' or chiefly village of Kiriwina Island, Malinowski noted that the ceremonial gift exchanges of prestige objects that were not locally produced generated chiefly prestige.³⁹⁶ Kiriwina Island, located at the northern edge of *kula* exchange, was in a marginal position within the *kula* network,³⁹⁷ which supports the

³⁹² Malinowski 1922.

³⁹³ Malinowski 1922, 81–104, map V.

³⁹⁴ Malinowski 1922, 100–104.

³⁹⁵ Malinowski 1922, 201, 207, 378, 482, 499.

³⁹⁶ Malinowski 1922.

³⁹⁷ Brunton 1975.

spread of chiefdoms throughout the Trobriand Islands through peer-polity interaction³⁹⁸ or so-called ‘competitive emulation’. Although the commoners on Kiriwina and other islands were excluded from this ceremonial exchange, they assisted their local chief in the construction of large canoes for long-distance sea voyages, and by their tribute of yams to the chief at each harvest.

The power of the chief at Omarakana extended to villages throughout the island, but not beyond it.³⁹⁹ The chief’s dwelling, alongside his yam storage house, dancing and burial grounds, was located in the centre of Omarakana village. The chief’s house and storage were both considerably larger than the other village structures, although the ‘chief’s personal dwelling is built like an ordinary house’,⁴⁰⁰ from the same materials and with the same internal organization. More than half of the village was occupied by the chief and his family. However, the settlement and the village society at Omarakana were divided into three parts: the chief and the chief’s wives, who occupied section A–B; the chief’s maternal kinsmen in section A–C; and the commoners who were not related to the chief in section B–C (see Fig. 8). Malinowski explains that this composition was only possible because the descent at Kiriwina was matrilineal, whereas post-marital residence at Kiriwina was avunculocal (a couple resided with husband’s mother’s brother after marriage), and only the chief enjoyed the privilege of polygamy.⁴⁰¹ Therefore, the chief’s kin network, extended through polygamy, was much larger than that of the rest of the community. Through it, the chief of Omarakana pooled and mobilized more goods and labour than any other household on the island as, due to well-established kinship obligations, each wife was entitled to receive goods from her maternal male kinsmen at harvest as well as on ceremonial occasions (e.g. the birth of a child). The chief’s affinal privileges (e.g. multiple wives) were therefore one of the reasons for the accumulation of wealth on the Trobriands, since at each harvest the chief’s wives received taro from their brothers, which were stored in the central chiefly storage house and used for financing local ceremonies and *kula* expeditions, which reflected the chief’s hereditary socio-political power.⁴⁰²

Daily life at Omarakana was centred around the household, composed of a husband, wife, and their children. They cultivated their gardens and prepared meals on a household level, and consumed food within the house. However, much of daily life took place outside the village, and these activities were commonly gendered. While women cooked and collected shellfish, timber, and wild fruits, men built canoes, engaged in fishing and hunting, and occasionally embarked on voyages overseas. Both men and women shared the responsibility of raising children. Men generally did not engage in cooking, but there were exceptions to the rule. Men participated in cooking taro or sago in large clay pots at harvesting time for ceremonial prestige, or out of necessity during the sea voyages, in the absence of women.⁴⁰³

In this first section of the chapter, I focused mainly on sedentary, tribal, non-state constellations, leaving out more mobile groups, such as hunter-gatherer societies and nomadic tribes, which, from the empirical outset, would have been less likely to occupy the settlements of Çukuriçi Höyük and Platia Magoula Zarkou during the EBA. I aimed to highlight differences between different ideal tribal constellations among sedentary non-state societies, as outlined from a presentist model-type understanding and supported by up-to-date encyclopaedia entries. Instead of treating these models as evolutionary stages, I showed the structural and socio-economic differences between different models of tribal societies in non-literate settings. I fully agree with Lawrence Rosen, who proposed:

³⁹⁸ Renfrew 1986.

³⁹⁹ Malinowski 1929.

⁴⁰⁰ Malinowski 1929, 22.

⁴⁰¹ Malinowski 1929.

⁴⁰² Malinowski 1922; Malinowski 1935.

⁴⁰³ Malinowski 1929.

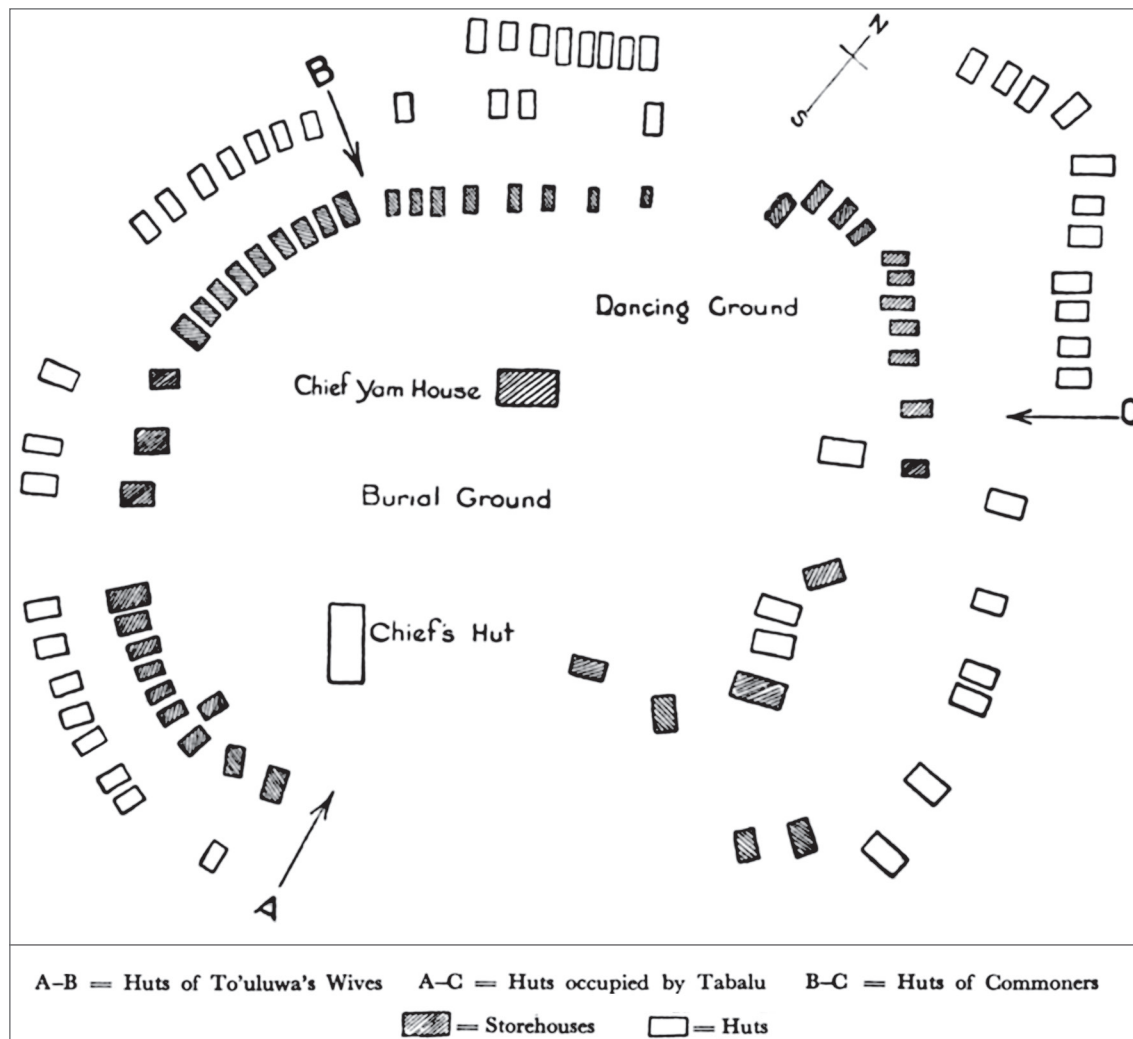


Fig. 8 Omarakana village plan (Malinowski 1935, fig. 2 reproduced in Mosko 2013, fig. 2)

‘If we think of tribes as a family of sociopolitical forms, it may not be in their structural manifestations but in the capabilities that allow them to adapt to varied circumstances that their distinctive features may be found.’⁴⁰⁴

He also suggested that contemporary anthropologists must disengage from the negative discourse about tribes, which today is largely mobilized for political means that portray tribes as violent, backward, immoral, anti-state systems.⁴⁰⁵ Although archaeologists are welcome to join this important anthropological stance in understanding tribes as a family of socio-organizational concepts rather than an apparent threat to the state, I see another important reason why research on tribes should remain on the archaeological agenda. This concerns the issue of non-state imagined communities, which was the case for most of the ethnographically documented non-state constellations, although rarely discussed as such. From the vast body of ethnographic literature, it appears that these sedentary, ‘post-Neolithic’ communities have always associated themselves with polities larger than a household or a village, and maintained

⁴⁰⁴ Rosen 2016, 3.

⁴⁰⁵ For an overview of the negative discourse regarding tribes, including state officials and columnists in liberal magazines, see Rosen 2016.

different levels of political (de)centralization, suitable to their subsistence strategies and socio-ecological landscape. While the boundaries of these non-state imagined communities cannot be drawn easily, such perceptions may encourage researchers to ask why and how any archaeologically visible (permeable) boundaries, which in some cases stretch over a particular region well beyond an archaeological trench, can emerge.

Taking this as a starting point, the socio-economic, political and religious relations observed in non-literate polities of 20th century Melanesia or elsewhere – remote from states – should remain valid when discussing prehistoric material, including the Early Bronze Age Aegean basin. Similar types of socio-economic relations as those described above, played a crucial role in building imagined non-state Bronze Age communities, here addressed as tribes, inherently different from those of states supported by print capitalism. However, it remains possible that the social organization during the EBA in the Aegean basin was inherently different from the models described above. Therefore, the possibility of a model that left no traces within the ethnographic record but could be inferred from the prehistoric archaeological record must remain open.

Concerning the archaeological material, it should also be noted that the initial enthusiasm about Renfrew's work regarding the simplicity of identifying chiefdoms in prehistory compared to more decentralized tribal constellations, has since vanished. Today, scholars outside the Aegean basin prehistory agree that some early temples that emerged with chiefdoms 'were so non-standardized that it can be difficult to identify them'.⁴⁰⁶ Moreover, the emergence of the centralized socio-political constellation can no longer be reduced to the increase of population, production of agricultural surplus, or people accumulating shells or pigs, since the 'inequality is orchestrated'.⁴⁰⁷ A tiny minority of persons – with or without a conductor – that constituted the initial orchestra of staging inequality through the possession of supernatural skills, bravery, or crafting expertise, will therefore remain obscure if we do not consult the ethnographic record. Firmly anchored centrality within chiefdoms was built into the structure of society rather than being based on personal achievement, the latter being an organizing principle of big man and great man societies. As we will see below, however, Renfrew's impact in *The Emergence of Civilization* attracted little or no attention to socio-political constellations other than chiefdoms during EBA 1 and 2 in the Aegean to date. Why this so and how have scholars inferred the social organization of the Aegean EBA 1 and 2 periods?

II.2. Anthropological Models of Social Organization in the EBA Aegean Basin

As already outlined in the introduction, asking questions regarding social organization in the Aegean is not a novel attempt. Therefore, the second section of this chapter presents an overview of similar published attempts in order to avoid the same pitfalls in this study. Since the 1970s, when Colin Renfrew proposed the emergence of chiefdoms as an entirely internal, Aegean phenomenon,⁴⁰⁸ scholars today agree that most Early Bronze Age sites were organized in chiefdoms. As I show in this section, these conclusions lie in the shadows of neoevolutionary theories, implying that chiefdoms should necessarily precede the Aegean Middle Bronze Age early states, and succeed or replace the Neolithic village-based farming societies, as the theoretical model predicts. Based on such unchanged predispositions, Renfrew, in his republished version of *The Emergence of Civilization*, himself noted that understanding of the later Bronze Ages has advanced significantly since his publication, whereas the advancements in

⁴⁰⁶ Flannery – Marcus 2012, 229.

⁴⁰⁷ Flannery – Marcus 2012, 206.

⁴⁰⁸ Renfrew 1972.

connection with the Early Bronze Age have been fewer in number.⁴⁰⁹ As I will show in the section that follows, the limited advances regarding the EBA social organization could be due to theoretical rather than empirical reasons. Almost fifty years after Renfrew's influential book, numerous Early Bronze Age sites have been excavated and provide new opportunities to draw fresh conclusions regarding the Early Bronze Age in the Aegean. However, alternative conclusions will continue to be viewed as far-fetched, if scholars are not willing to step away from the lens of neoevolutionary theories that haunt the Aegean Early Bronze Age I developments, as will be shown below.

The models of tribal social organization outlined above, however, have so far rarely been considered in such a form as for the present purpose. Instead, tribe as a stage in social evolution necessarily proceeding chiefdom on the evolutionary line, rather than as an ideal type of social organization, was taken as an undifferentiated unit of analysis against archaeological data. This issue has arisen in archaeologists' discussions of anthropological models: the topic of this section. In the 1970s, soon after the introduction of the neoevolutionist classification of societies along the line of band, tribe, chiefdom, state,⁴¹⁰ processual archaeologists began to make use of this classification in the Aegean. Pioneering work on the socio-political organization of the Early Bronze Age Aegean argued that the development of chiefdoms⁴¹¹ in Europe would date back to this period.⁴¹² Heavily inspired by neoevolutionist theories, Renfrew attempted to understand the social organization which predated Mycenaean (2600–1100 BC) and Minoan (1600–1100 BC) civilization, the early states in the Aegean World.

Renfrew studied EBA metal objects as a valuable archaeological marker of rank and craft specialization. By assessing the presence or absence of metal objects from the mostly mortuary assemblage and their importance for regional exchange, he concluded that metal-using cultures in the EBA Aegean were socially differentiated by rank, and therefore organized in either individualizing or group-oriented chiefdoms.⁴¹³ Moreover, he supported this evidence by analysing subsistence practices, which, he argued, changed during the EBA from small-scale and self-sustainable (Domestic Mode of Production) to the *Mediterranean polyculture*, which is distributive in nature and relies on three main crops: wheat, olives, and grapes (as opposed to the reliance on pulses and cereals in the previous phases).⁴¹⁴ The third body of evidence supporting the existence of chiefdoms in the EBA was the evidence for settlement hierarchy and monumental architecture (e.g. fortifications, palace-like structures, and the division between larger sites/central places and smaller sites/peripheries), which also emerged during this period.⁴¹⁵

Renfrew's seminal work *The Emergence of Civilisation: The Cyclades and the Aegean in the Third Millennium BC*⁴¹⁶ provided 'an important synthesis – certainly the most important of its kind for several decades'.⁴¹⁷ The book has remained influential and its reprinted version

⁴⁰⁹ Renfrew 2011 [1972], xli.

⁴¹⁰ Sahlins 1961; Service 1962; Sahlins 1963; Fried 1967; Sahlins 1968; Service 1971; Service 1975; Fried 1975.

⁴¹¹ Renfrew and other processual archaeologists followed the model of chiefdom social organization developed by Service 1962 and Sahlins 1968. For the specific characteristics of a chiefdom and a tribe, see Tab. 1 (after Sahlins 1968).

⁴¹² Renfrew 1972.

⁴¹³ Renfrew 1972. Technology as the prime mover of social change was first proposed by Morgan, and taken for granted by many Marxist scholars. Morgan was the first to classify metalworking societies as being at the advanced stage of barbarism. Childe instead argued that metalworking was the key reason for the breakdown in kinship relationships that had united Neolithic societies, and replaced them with class-based societies, since the metallurgists were the earliest class of full-time specialists in the Old World.

⁴¹⁴ Renfrew 1972.

⁴¹⁵ Renfrew 1972.

⁴¹⁶ Renfrew 1972.

⁴¹⁷ Wheeler 1972, 327.

(without revision) saw the light of day in 2011.⁴¹⁸ Subsequent studies have often confirmed Renfrew's contribution. Researchers argued that the EBA evidence at Troy is a perfect example of 'a fully developed chiefdom'⁴¹⁹ and claimed that the period between the 6th and the 3rd millennium BC in the entire region of western Asia can be perceived as a period of transition from 'egalitarian' to stratified societies.⁴²⁰ However, this simplistic view, denying the diversity of social organization within a large geographical region over a long period of time, did not hold for long. Proponents of processual archaeology had not considered the assessment of the EBA Aegean societies through a less rigidly stratified tribal social organization, but instead reached a consensus that it must have been organized in chiefdoms.⁴²¹ This consensus may have been reached due to the very limited pool of evidence (prior to new evidence collected from excavations from the 1970s onwards), focused primarily on domestic architecture at Troy in western Anatolia and Lerna on the mainland Aegean, as well as mortuary evidence from the Cyclades. The second explanation for these outcomes can be assigned to the neoevolutionist theoretical predisposition, in which scholars searched for predecessors of states (implying a necessary continuity between chiefdoms and states), instead of taking local histories as the main focus of study.

A decade later, instead of the initial three, seven categories of archaeological evidence were used to re-assess social organization in the EBA Aegean. In his study, Pullen⁴²² assessed eight categories for social inequality: ranking of the individual, corporate groups, occupation or craft specialization, architectural variation, access to resources and goods, agriculture, trade and exchange, and regional and administrative hierarchies.⁴²³ The outcomes of this research disproved Renfrew's Mediterranean theory of polyculture and refuted the evidence for metallurgical or other kinds of specialization, but supported a two-level hierarchy in which smaller sites were dominated by larger sites during EBA 2.⁴²⁴ A comparison of these results revealed three major shortcomings of Renfrew's research: 1) the absence of comprehensive empirical testing within the narrow region, 2) an overreliance on neoevolutionary theory proposing development along the band-tribe-chiefdom-state model (and therefore arriving at the conclusion that chiefdoms preceded the early states in the Aegean), and 3) the reliance on a system model in which social organization was relegated to a subsystem.⁴²⁵

The post-processual turn, which followed the New Archaeology/Processual Archaeology phase in the late 1980s, left little room for pursuing further any research based on neoevolutionary theory, or on models derived from it. Instead, post-processual archaeologists called for the prioritization of research on local practices and individual agency in a particular (pre) historic context, alongside the interpretative archaeology of symbolic meaning.⁴²⁶ Therefore,

⁴¹⁸ Renfrew 2011 [1972].

⁴¹⁹ Eslick 1988, 39, herself referring to Renfrew 1972.

⁴²⁰ Eslick 1988, 10.

⁴²¹ Renfrew 1972; Eslick 1988.

⁴²² Pullen 1985, 369.

⁴²³ In this follow-up study, the ranking of the individual was addressed through mortuary data, which confirmed differences in wealth in EBA Greece. Corporate groups were assessed through the analysis of tombs and cemeteries, in which a nuclear family or, in some cases, larger groups were represented. Occupation or craft specialization was analysed through metallurgical, seal, and construction technologies, for which data was scarce, and showed little evidence for full-time specialists. Architectural variations identified through the assessment of buildings indicated both domestic (mostly houses) and 'industrial' structures. Access to resources and goods, according to the assessment of metals and obsidian, has proven to be highly differentiated during the EBA. Research on agriculture provided no support for a distributive *Mediterranean polyculture* (as previously proposed by Renfrew), but regional and administrative hierarchies were addressed by the size of sites, which showed a two-level system of administration in which larger sites controlled the smaller ones (Pullen 1985).

⁴²⁴ Pullen 1985.

⁴²⁵ Pullen 1985.

⁴²⁶ Hodder 1985. Hodder's 1980s intervention of historical particularism in archaeology can be compared to Boas' intervention in anthropology that disrupted and transformed the discipline at the beginning of the 20th century.

the majority of archaeologists abandoned approaches of cross-cultural comparison and engagement with neoevolutionary theories to discuss social evolution,⁴²⁷ and instead embraced interpretative, agent-focused archaeological investigations. This aversion to neoevolutionary theory also coincided with the abandonment of analytical concepts such as tribe (though less so ‘chiefdom’) within prehistoric archaeology. However, as I argue in this section, for the sake of cross-cultural comparison and the advancement of anthropological and archaeological theory, the models of non-state social organization should find their place (albeit in a revised version) within the post-processual archaeological agenda, and even more so now in the context of an ontological turn within both disciplines.

Beyond any means of cross-cultural comparison and theoretical advancements, the ideal types of tribes may remain useful when conducting the site-based analysis. To show this, I will look at both some major site-based and region-based conclusions regarding the EBA 1 and 2 social organization on both sides of the Aegean basin. First, I will discuss the sites relevant to my first case study, namely the EBA 1 site of Çukuriçi Höyük, and what type of socio-political organization has previously been inferred from other EBA 1 settlements in the region. Then, I summarize some major conclusions relevant to my second study, namely Platia Magoula Zarkou. In the latter case, I discuss the developments on the Thessalian plain during the EBA 1 and 2 period, to highlight some major differences between the two periods. These are relevant to the contextualization of EBA 1 in the Aegean basin more broadly, beyond western Anatolia, and the immediate comparison of Platia Magoula Zarkou’s EBA 2 layers to other contemporaneous EBA 2 Thessalian sites.

Social Organization in EBA 1 Western Anatolia

First, let us have a look at the EBA 1 developments in discussing social organization relevant to a few EBA 1 sites in western Anatolia. Since the paradigmatic shift from processual to post-processual archaeology, Renfrew’s theory of EBA Aegean chiefdoms has been vigorously challenged. Contemporary scholars agree that EBA Anatolia is not a single entity, and therefore can no longer be analysed by sweeping generalizations.⁴²⁸ Today, an even stronger emphasis is being placed on the distinction between the three main subperiods within EBA 1: EBA 1 early, EBA 1 middle, and EBA 1 late.⁴²⁹ In EBA 1 western Anatolia, scholars have already proposed the emergence of the EBA 1 ‘cultural koine’ organized in chiefdoms, whereas other site-based analyses have argued for either the existence of chiefdoms or more ‘egalitarian societies’. In this first section, I show how useless the idea of egalitarianism or ‘egalitarian’ social organization becomes if we do not identify between whom and how ‘egalitarian’ relations were established at the EBA 1 sites in western Anatolia, or elsewhere. The latter point, as well as the usefulness of site-based household archaeology for discussing social organization at EBA 1 western Anatolian sites, will be derived from the extensive research on the Troy I settlement. As the third point in this section, an important question is being raised regarding Ourania Kouka’s internally heterogeneous uniformity within the EBA 1 western Anatolian ‘cultural koine’ and the increasing popularity of heterarchical social organization within archaeological literature.

New excavations in the western Anatolian and the eastern Aegean islands since 1970⁴³⁰ and comparison of these finds provided additional information and significantly contributed to our

⁴²⁷ After the 1980s, exceptions to the above rule are best represented in the work of Kent Flannery, Keith Wright and Timothy Earle.

⁴²⁸ Algaze 1999; Kouka 2002; Çevik 2007; Özdoğan 2011; Kouka 2013; Fidan et al. 2015.

⁴²⁹ Sahoğlu 2005.

⁴³⁰ These sites comprise of ‘extensively excavated sites, such as Poliochni and Myrina on Lemnos, Thermi on Lesbos, Heraion on Samos, Palamari on Skyros, Troy, Liman Tepe and Bakla Tepe, as well as less extensively excavated sites, such as Skala Sotiros and Limenaria on Thasos, Mikro Vouni on Samothrace, Koukonissi on

understanding of both differences and similarities within this ‘region’. These excavations also drew attention away from Troy, which nevertheless remains a prime site for research on the EBA period. Scholars have demonstrated differences in EBA 1 ceramics between the Anatolian inland and coastal sites,⁴³¹ as well as different settlement patterns in these two ecologically different environments.⁴³² Kouka proposed that at the beginning of EBA 1, the coastal sites of western Anatolia and the northern and eastern Aegean islands represented a ‘cultural koine’,⁴³³ a ‘cultural uniformity in terms of political and economic structures and social dynamics’,⁴³⁴ different from its hinterlands. Scholars meanwhile extended Renfrew’s idea of the EBA 2 ‘international spirit’⁴³⁵ to the Izmir region during EBA 1. They identified it as a common marketplace and a bridge for the transfer of goods, ideas, and technologies between culturally different areas, leading to ‘internationalization’ during the EBA.⁴³⁶

A recent reassessment of Troy I architecture has contested the long-held interpretation of the site as a chiefdom during EBA 1. The EBA 1 layers at Troy I, dating to the beginning of the 3rd millennium BC, have so far been interpreted in multiple, contrasting ways. In the 1950s, C. W. Blegen⁴³⁷ identified House 102 at Troy I as a free-standing, special building, the so-called ‘Megaron’, also seen at later Troy II and other EBA 2 Aegean sites (e.g. Lerna’s House of Tiles).⁴³⁸ Christine Eslick,⁴³⁹ closely following Renfrew, interpreted Troy I as a fully developed chiefdom, based on the evidence of House 102 as the ‘Megaron’ and the enclosure wall surrounding the settlement. Maria Ivanova,⁴⁴⁰ who recently conducted household archaeology at Troy, showed that House 102 was not free-standing but rather an attached building, which did not differ from other houses in domestic activities or internal arrangement. This led her to conclude that Troy I represents a homogeneous community with an ‘egalitarian ethos’,⁴⁴¹ without any specification of what ‘egalitarian’ stands for.

Ivanova does not limit her interpretation to the EBA 1 settlement of Troy I but stretches it to the whole of western Anatolia: ‘The vernacular pattern at Troy I and other contemporary sites in western Anatolia implies homogeneous communities of economically uniform households with low privacy requirements and an egalitarian ethos.’⁴⁴² This example may serve as an excellent case study in which household archaeology can provide new results for evaluating the social organization at a specific site. At the same time, it should be taken into account

Lemnos, Emporio on Chios, Asomatos on Rhodes, Beşik-Yassı Tepe, Yeşilova, Çeşme-Bağlararası, Çukuriçi Höyük, Miletus, Tavşan-Adası and Iasos’ (Kouka 2014, 43).

⁴³¹ Efe 1988; Fidan et al. 2015.

⁴³² Düring 2011.

⁴³³ Kouka 2013, 576. The term ‘cultural koine’ has so far not been contested within archaeological literature, despite being borrowed from linguistics, where it denotes a standard language or dialect that has arisen as a result of contact between two groups speaking different dialects of the same language.

⁴³⁴ Kouka 2013, 117.

⁴³⁵ Renfrew 1972. Given that there were no ‘nations’ at the time, the use of the term ‘international spirit’ (Renfrew 1972) is also misleading for this period. It downplays the fact that in non-state societies people also commonly exchange things beyond their tribal boundaries. The existence of regional, inter-tribal exchange, however, does not mean that there was an ‘international spirit’ as in nation-states or associated institutions that enabled or downplayed these trading interactions. Instead, it seems more appropriate to speak of wider regional, cross- or inter-regional interactions, be they trans-maritime or cross- and inter-continental interactions, without nation-based institutions such as the market, yet with primitive money and a differentiated value of goods, some of which were exchanged more widely than others during this period.

⁴³⁶ Şahoğlu 2008.

⁴³⁷ Blegen et al. 1950, 92.

⁴³⁸ For a more detailed discussion of the contrasting interpretation of House 102 at Troy I and its settlement pattern, see Ivanova 2013; Ivanova 2016.

⁴³⁹ Eslick 1988, 39, by referring to Renfrew’s earlier interpretation.

⁴⁴⁰ Ivanova 2013; Ivanova 2016.

⁴⁴¹ Ivanova 2016, 31.

⁴⁴² Ivanova 2013, 31.

that such site-based results, generated through household archaeology, cannot and should not necessarily be seen as representing the development in the entire region. Is Troy I necessarily a representative case for the whole of EBA 1 western Anatolia? How can we support such a claim and what is it based on? Without addressing these immediate questions to understand its predisposition, it remains challenging to advance generalized claims about the wider region based on the site-based, household archaeology of a particular settlement, without a multi-scalar approach. Therefore, more precautions should be taken in how far we can go with the interpretation of regional developments, beyond the primary site of interest, based on results generated through household archaeology. It may be more constructive to understand site-based analyses and results as complementary or refining, rather than immediately disproving the major regional developments, having the potential to highlight diversity within a region and to outline unequal developments within the overall, seemingly homogeneous yet internally heterogeneous, trajectory.

According to Ivanova, major changes in settlement architecture at Troy and elsewhere appeared during the mid-3rd millennium BC, at Troy II and other EBA 2 sites, which ‘coincide with important social changes. An ‘élite’ form of the long-room structure, the so-called megaron, emerged at this time from the traditional dwelling.’⁴⁴³ Another line of evidence, looking at the indicators and amount of trade in EBA 1/2 Troy, also suggested that this site did not play a major role in long-distance trade during this period.⁴⁴⁴ Therefore, it is highly plausible that an ‘egalitarian’ organization emerged at Troy before the mid-3rd millennium BC, when direct connections were established with Mesopotamian elites. This resulted in sudden changes in the socio-political organization, and the establishment of Trojan elites during the EBA 2 period.⁴⁴⁵

In this context, it is evident that the term ‘egalitarian’ is used as a marker of the absence of social stratification or inequality, but being ‘egalitarian’ remains an extremely vague term when discussing the internal characteristics of social organization. In this context, authors do not refer to ‘egalitarian’ hunter-gatherer groups but to ‘egalitarian’ sedentary communities dependent on farming, and they specify little with regard to why these societies are ‘egalitarian’. By ‘egalitarian’, they do not refer to politically more-or-less centralized chiefdoms but to decentralized entities, possibly tribes. It seems obvious that the term tribe, which may shed more light on the actual social organization of these sites, is often avoided at all costs. A good example of such avoidance is the description of Troy I, where it has been argued that ‘residential units possibly had similar requirements, were equal in their position, and therefore produced dwellings with nearly identical form, size, and internal arrangement’.⁴⁴⁶ This description of the archaeological evidence evokes without reference Durkheim’s mechanical solidarity⁴⁴⁷ or Sahlins’s Domestic Mode of Production,⁴⁴⁸ principles that could only be examined if a tribe is considered as a basic type of social organization. The way in which Ivanova uses the term

⁴⁴³ Ivanova 2013, 31.

⁴⁴⁴ Ünlüsoy 2016.

⁴⁴⁵ Ünlüsoy 2016.

⁴⁴⁶ Ivanova 2016, 46.

⁴⁴⁷ Durkheim 1968 [1893]. Emile Durkheim laid the foundations for the discussion of social organization at the end of the 19th century. In his seminal doctoral thesis, published in 1893, he theorized about two types of solidarity, *mechanical* and *organic*, based on differences in the population and the division of labour. According to Durkheim, *mechanical societies* are those in which members share common values through segmentary integration. Mechanical societies commonly have low populations and material density, and have collective authority. In turn, the strong division of labour, which demands the integration of members with different values, characterizes *organic societies*. These commonly operate through a market economy, allowing high population densities, and priority within organic societies is given to an individual rather than collective action (Durkheim 1968 [1893]). Unlike Morgan, who treated technology as the main driver of change, Durkheim argued that *population growth* and the *division of labour* are the main drivers toward increasing complexity and the development of organic societies.

⁴⁴⁸ Sahlins 1972.

‘egalitarian’ does not make clear in relation to what these domestic units were ‘egalitarian’. The question of whether egalitarianism at EBA 1 Troy refers to ‘egalitarian’ relations between subunits (i.e. households), between generations, or between different genders that belonged to these subunits, remains unanswered.

In the Izmir region, at Liman Tepe, architectural evidence for the existence of ‘elite populations, possibly chiefs’⁴⁴⁹ has been identified in EBA 2, which in this region dates to a few centuries before the mid-3rd millennium BC, around 2700 BC. The evidence for a chiefdom was ascribed to a large building complex located in the courtyard, surrounded by rectangular storage rooms.⁴⁵⁰ A similar interpretation has been inferred from a brief comparison of the small western Anatolian EBA 2 sites, which were supposedly administered by a chief, but apart from the chief’s office, no other religious or administrative classes are reflected in the archaeological record.⁴⁵¹ If compared to the record at Troy, then chiefdoms in the Izmir region preceded the development of chiefdoms in Troy by several centuries. Although this is fairly feasible, the conclusions for Liman Tepe are based exclusively on the interpretation of architecture, whereas at Troy the architecture has been analysed alongside the interiors of the houses. Research from Troy showed that the rooms once interpreted as a ‘megaron’ by the excavator, and later referred to as the seat of the chief, were actually a household structure accommodating one family, which, in its internal composition, was not different from other houses.⁴⁵² This case reveals the considerable advantage of household archaeology approaches for interpreting the social organization at EBA 1 sites. Research at Çukuriçi Höyük, which supposedly belongs to the EBA ‘cultural koine’ of western Anatolia and the northern and eastern Aegean islands,⁴⁵³ can potentially highlight the differences and similarities in the socio-political organization within the ‘cultural koine’ and the Izmir region itself.

Before we proceed to the next section on discussing the social organization in EBA 1 and 2 on the Thessalian plain, it is important to summarize three main conclusions stemming from this section. The first point regards the potential for advancements but also drawbacks of household archaeology. Based on the example of Troy I, it is evident that household archaeology and site-based analysis of domestic architecture and domestic activities may generate new results, refuting older interpretations. However, these new interpretations should, to an extent, remain site-based rather than generalized conclusions applicable to the entire region or period. Second, accepting that household archaeology at Troy I refuted the existence of a chiefdom at this site and instead proposed an ‘egalitarian ethos’, we should establish how and between whom the ‘egalitarian’ ethos was established at a particular site. Equating household activities does not necessarily imply egalitarian relations within households, as becomes evident if we take ethnographic accounts of ‘tribes’ into consideration (see Chapters II and VII). Third, the established EBA 1 littoral ‘cultural koine’, evident from the eastern Aegean islands and western Anatolia,⁴⁵⁴ can be further explored, to address what kind of heterogeneity existed between sites alongside ‘cultural uniformity’, seemingly reflected in both economic structures and socio-political organization, as argued by Ourania Kouka.⁴⁵⁵ Following these three interim remarks on research dealing with social organization in EBA 1 western Anatolia, let us now turn to the Thessalian plain.

⁴⁴⁹ Çevik – Sağır 2016, 270.

⁴⁵⁰ Çevik – Sağır 2016.

⁴⁵¹ Özdoğan 2006.

⁴⁵² Ivanova 2016.

⁴⁵³ Kouka 2013.

⁴⁵⁴ Kouka 2002; Kouka 2013; Kouka 2016a; Kouka 2016b.

⁴⁵⁵ Kouka 2013, 117.

Social Organization in the EBA 1/2 Thessalian Plain

This study's initial aim was to look beyond the EBA 1 Eastern Aegean and western Anatolian 'cultural koine' and compare the results from Çukuriçi Höyük to Platia Magoula Zarkou, located on the other side of the Aegean, outside the 'cultural koine'. But in the course of this research, it has turned out that the EBA settlement at Platia Magoula Zarkou dates to the later EBA 2 period, rather than the initially anticipated EBA 1 period. Therefore, Platia Magoula Zarkou EBA 2 layers and Çukuriçi Höyük EBA 1 layers are, unfortunately, not directly contemporary to each other. Since the start of our DOC-teamwork, doubts had been raised about the EBA 1 dating of the site. This dating was initially inferred from relative chronology: the macroscopic pottery analysis by the excavator, Kostas Gallis seemed to suggest it. However, Constanze Moser, who worked with EBA Platia Magoula Zarkou's pottery assemblage, has continuously voiced her concerns.⁴⁵⁶ The excavator, Kostas Gallis, initially proposed that the Platia Magoula Zarkou EBA layers relatively date to the earliest layers of the Early Helladic I/EBA 1 period.⁴⁵⁷ This relative chronological inference was made based upon the presence of rolled-rim bowls as well as bowls of the Bratislava type, pointing towards the participation of Platia Magoula Zarkou in the Aegean and Balkan networks and the site being supposedly contemporaneous to Late Chalcolithic Mikrothives and Early Helladic I Petromagoula in Thessaly.

The later dating of Platia Magoula Zarkou, to the mid-3rd millennium BC, has been attested through three different pools of data. The first one was the relative chronology of revisited pottery analysis from the site. According to the macroscopic analysis by my DOC-team colleague Constanze Moser, no Bratislava bowls have been attested at the site.⁴⁵⁸ Instead, Constanze at the time believed that the relative chronology at Platia Magoula Zarkou points towards the Early Helladic II period based on the attested sauceboats at the site, typical for the Early Helladic II period, dating to the mid-3rd millennium BC.

Constanze's doubts regarding the dating of Platia Magoula Zarkou's EBA layers have since been confirmed through ¹⁴C dating,⁴⁵⁹ showing that the site's occupation dates to the mid-3rd millennium BC,⁴⁶⁰ instead of the earliest centuries of the 3rd millennium BC initially proposed by the excavator.⁴⁶¹ As the third line of evidence, possible indicators of the later dating of the EBA Platia Magoula Zarkou settlement layers have also been confirmed through geophysical investigation surrounding the magoula. This investigation has confirmed the off-mound settlement and an enclosure surrounding the mound,⁴⁶² both being common features of the Early Helladic II period in the mainland Aegean. Therefore, the Early Bronze Age at Platia Magoula Zarkou does not date to Early Helladic I as initially proposed⁴⁶³ but to the Early Helladic II period, confirmed through the relative pottery chronology,⁴⁶⁴ ¹⁴C dating of animal bones,⁴⁶⁵ and geophysical prospection.⁴⁶⁶

As Platia Magoula Zarkou is located within modern-day mainland Greece (the Thessalian plain), it is important to understand the Bronze Age period as being based on distinct pottery groups, which span over three long periods: Early Helladic (EH), Middle Helladic, and Late

⁴⁵⁶ C. Moser, pers. comm 2017, 2018, 2019.

⁴⁵⁷ Gallis 1996.

⁴⁵⁸ C. Moser, pers. comm. 2019.

⁴⁵⁹ Weninger et al. 2022.

⁴⁶⁰ Weninger et al. 2022.

⁴⁶¹ Gallis 1996.

⁴⁶² Sarris et al. 2022, see Fig. 28 for visualization of some results generated through geophysical investigation at Platia Magoula Zarkou.

⁴⁶³ Gallis 1998.

⁴⁶⁴ C. Moser, pers. comm. 2019.

⁴⁶⁵ Weninger et al. 2022.

⁴⁶⁶ Sarris et al. 2022.

Helladic.⁴⁶⁷ These periods coincide with the Early Bronze Age, Middle Bronze Age, and Late Bronze Age in other regions. The EH period, which follows the Final Neolithic or Chalcolithic in the region,⁴⁶⁸ is further subdivided into EH I (3000–2700 BC), EH II (2700–2200 BC), and EH III (2200–2000 BC),⁴⁶⁹ also known as EBA 1, 2, and 3 in western Anatolia.⁴⁷⁰ EH I has been referred to as ‘enigmatic’ regarding social organization, due to the modest quantity and poor quality of finds related to this period in comparison to EH II, which often dominates the perception and interpretation of the whole Early Bronze Age on the Greek mainland.⁴⁷¹

Following a few initial remarks regarding the chronology of Platia Magoula Zarkou and its wider region, the following section summarizes the major claims useful for discussing social organization in both EBA 1/EH I and EBA 2/EH II in Thessaly and the wider mainland Aegean. The former, EH I period will serve as a comparative view of the EBA 1 developments in western Anatolia, whereas the latter, the EH II period, will serve as the main source for comparison of the EH II sites on the Thessalian plain and in the wider mainland Aegean. In this section, we conclude that the EH I layers on the Thessalian plain show little differentiation from Neolithic settlement layers. However, EH I sites in Thessaly are extremely rare compared to EH II sites and therefore, more data, generated through new excavations, should be collected to support this claim. The stronger distinction between the EH I and EH II sites, however, has led scholars to distinguish between village-based, tribal societies in the EH I period and the EH II incipient chiefdoms in the region. Unlike in western Anatolia, where Renfrew’s ‘international spirit’, initially proposed for the EBA 2 period, has been pushed back to the EBA 1 period by subsequent analyses in the form of the EBA 1 ‘cultural koine’, containing EBA 1 sites homogeneously organized in chiefdoms,⁴⁷² Thessalian EH I sites fall outside this EBA 1 east Aegean and western Anatolian ‘cultural koine’. On the Aegean mainland, the Early Bronze Age scholars agree that most of the sites were organized in chiefdoms during the EH II period; however, they question the emergence of chiefdoms during the EH I period, as will be summarized below.

The earliest investigation of the social organization of EH I in Thessaly argued for little differentiation between the Neolithic and Early Bronze Age modes of life. The argument was that Late Neolithic/Late Chalcolithic finds are not easily distinguished from the EH I layers.⁴⁷³ Scholars argued that until the end of the EH I period, no centre or civilization had developed on the Greek mainland before the earliest signs of social stratification, central authority, and distributive economy – indicating a chiefdom – were identified at Lerna’s ‘House of Tiles’⁴⁷⁴ during EH II.⁴⁷⁵ A follow-up study of Lerna’s EH II deposits has raised some concerns with Renfrew’s research (summarized above), but nevertheless reaffirmed the existence of regional as well as intra-site social differentiation during EH II.⁴⁷⁶ Pullen showed that the inhabitants of the ‘House of Tiles’ structure were able to extract goods from others, which points to the existence of permanent leadership, control, administration, and regional settlement hierarchy

⁴⁶⁷ Wace – Blegen 1918.

⁴⁶⁸ Alram-Stern 2014.

⁴⁶⁹ Wace – Blegen 1918.

⁴⁷⁰ Sahoğlu 2005.

⁴⁷¹ Peperaki 2007.

⁴⁷² Kouka 2002; Kouka 2013; Kouka 2016a; Kouka 2016b.

⁴⁷³ Christmann 1966; Renfrew 1972; Alram-Stern 2004.

⁴⁷⁴ At the enclosed site of Lerna, the ‘House of Tiles’, a two-storey building (12 x 25m), also called a ‘corridor house’ or ‘proto-palace’, was interpreted by Renfrew as a chiefly building due to its size and the fragments of 127 clay seals found within this building (indicating a central authority and redistributive system).

⁴⁷⁵ Renfrew 1972; Wiencke 1989.

⁴⁷⁶ Pullen 1985.

during EH II.⁴⁷⁷ The existence of central places, located 10–20km apart, surrounded by smaller sites during EH II⁴⁷⁸ has also been recently attested for the EH I period.⁴⁷⁹

These ‘central places’ or ‘large sites’ developed during EH I at lower elevations, in stable environments (often coastal plains), and these sites are generally long-lived tell-sites.⁴⁸⁰ By contrast, the ‘smaller sites’ common to EH I and II, were located in a wide variety of environments, usually less stable ones, and were generally short-lived.⁴⁸¹ *Platia Magoula Zarkou* can be classified among the ‘large sites’ not due to its size but due to its location on the fertile Thessalian plain, 1km from the Pineios River, which seems to have played a crucial role in the site’s longevity, as it was occupied from the Early until the Late Bronze Age.⁴⁸²

In their search for primary and secondary states on the Aegean mainland, scholars proposed the following distinction: autonomous village societies integrated through a tribal/‘egalitarian’ model of social organization during EH I, and incipient chiefdom societies dependent on networks and central authority during the EH II and III periods.⁴⁸³ They also argued that the contemporary tribal societies in the Shala Valley region of Albania may serve as a corresponding parallel for Neolithic and Early Bronze Age Greece, since non-state systems of reciprocal labour exchanges, feasting, and feuding still coexist with the state system in this area.⁴⁸⁴ A diachronic investigation based on archaeological surveys and GIS (Geographic Information System) of the Aegean from the Neolithic to the Bronze Age proposed three types of regional integration of the archaeological sites: small villages connected by networks of trade in the Neolithic, the coexistence of small villages with larger sites in EH I, and competing chiefdoms in EH II (evident from daggers, indicating a higher rank of individuals, and commonly fortified sites).⁴⁸⁵ Additionally, feasting in return for labour exchange has been identified in EBA 2 in the Peloponnese.⁴⁸⁶

Despite these attempts, the social organization of the EH I/II sites on the Thessalian plain remains puzzling. In the introduction to the reprint of *The Emergence of Civilisation*, Renfrew stated that since the 1970s, ‘progress in understanding the social organization of the Aegean Early Bronze Age has not advanced as much as for the later bronze age’.⁴⁸⁷ Apart from the detailed research on Lerna’s EH II ‘House of Tiles’,⁴⁸⁸ most of the research on social organization within the mainland Aegean still predominantly relies on survey data or mortuary assemblages for the EH I period. Common to most of these investigations is still the search for the predecessors of early states, rather than understanding EH I societies in their own right, and alongside their own history in context. Moreover, on both sides of the Aegean Sea, the chiefdom as a form of social organization is widely accepted for EBA 2, whereas EBA 1 social organization remains less clear. Therefore, it is time to now re-examine the latest evidence through household archaeology and to discuss the existing literature in order to see whether a tendency towards a chiefdom form of social organization does indeed stem merely from theoretical predispositions, or if it is also evident from the archaeological record at two contemporaneous but ecologically different settlements. For this reason, both centralized chiefdoms and more decentralized versions of tribes will be examined in this study, detached from the

⁴⁷⁷ Pullen 1985.

⁴⁷⁸ Wiencke 1989.

⁴⁷⁹ Whitelaw 2000.

⁴⁸⁰ Whitelaw 2000.

⁴⁸¹ Whitelaw 2000.

⁴⁸² Pentedeka 2011.

⁴⁸³ Parkinson – Galaty 2007.

⁴⁸⁴ Nakassis et al. 2016.

⁴⁸⁵ Pullen 2011b.

⁴⁸⁶ Pullen 2017.

⁴⁸⁷ Renfrew 2011 [1972], xli

⁴⁸⁸ Pullen 1985; Pullen 2011b.

old notion of tribe, persistent in archaeological writing, which is also the topic of discussion in the section below.

The Disputed Category of a Tribe

Why tribe? The old notion of the tribe has a troubled history in socio-cultural anthropology and prehistory alike. Why should we insist on using this term? Does it bring anything to the discussion of more or less sedentary, non-state societies, given its flaws? It is no secret that most of my anthropology colleagues would agree with abandoning tribe as an analytical tool as it is an outdated, old-fashioned, and politically charged notion not only for the past but also for present societies. Based on India's example, the country with the largest number of indigenous populations today, tribal peoples or *Adivasis* (meaning 'first dwellers') as they call themselves, suffer immensely under the state's assimilationist policies.⁴⁸⁹ I argue that the term indigenous peoples or emically *first dwellers* may be useful for the present-day ethnographic research, to voice and combat the state-sanctioned assimilationist policies of repression, annihilation, and assimilation of the indigenous peoples.⁴⁹⁰

In contrast to the *Adivasis* in today's India, neither the inhabitants of EBA Çukuriçi Höyük nor those of Platia Magoula Zarkou can be labelled as the first dwellers. In fact, they were not. Both sites were already occupied during the Neolithic period and, beyond any trading contacts, it is hard to trace any impact of the Early States in these parts of the Aegean basin at the time. Therefore, for archaeological purposes, first dwellers⁴⁹¹ or indigenous peoples may be a much less appropriate term than a tribe, the latter signifying people's connection to land, territorial boundaries, and social organization beyond the household (see section II.1 above). In archaeology, claims to being 'first dwellers' are in most cases overturned through new excavations that turn those people into second or third dwellers. For these among other reasons, it is more useful to operate with tribes as a socio-political term, without implying their indigenous nature or first-dwelling status, but instead highlighting features that link households into larger socio-political units, beyond houses and households. We can do that only if we understand tribes as a fuzzy category – the topic of the subsequent section – and recognize the tribe's troubled history in both socio-cultural anthropology and prehistoric archaeology, which will be discussed briefly below. We can detach ourselves from these misconceptions of tribes and the term's troubled history by reconceptualizing the idea of tribes rather than proposing a name change, as has recently been the case in some parts of socio-cultural anthropology. While discarding the term tribe's universal significance, its descriptive and regional value remains valid within contemporary socio-cultural anthropology.⁴⁹²

The incompatibility between the empirical and theoretical unit of a tribe has a long history within archaeology and socio-cultural anthropology. William A. Parkinson, who contextualizes the EH I societies as tribal and 'egalitarian',⁴⁹³ is an exception among the archaeologists who, at least in Old World prehistory, does not resist using the term and concept of tribe. Aware of its past misuses, he maintains that tribe should remain in use because 'the term has a long history in cross-cultural anthropology, and because it denotes a form of social organization generally

⁴⁸⁹ India has recently introduced tribal boarding schools, which have been heavily criticized by *Sapiens*: <https://www.sapiens.org/culture/kalinga-institute-of-social-sciences/>. These Indian tribal boarding schools feature some similarities to the 19th- and 20th-century boarding schools in North America, aimed at stripping 'indigenous peoples of their families, languages, and cultural identities'.

⁴⁹⁰ In other contemporary contexts ranging from the US via Australia to Siberia, however, indigenous populations in fact insist on being recognized as 'tribal' in view of ensuing legal rights.

⁴⁹¹ In archaeology, an exception can be made for the first permanent settlers or the so-called pioneering Neolithic communities.

⁴⁹² Gingrich 2001a; Gingrich 2015b.

⁴⁹³ Parkinson 2002; Parkinson – Galaty 2007.

understood to refer to a wide range of social systems that regularly exhibit some degree of institutionalized social integration beyond that of the extended family unit, or band.⁴⁹⁴

Since the 1950s, the analytical value of tribe has been questioned among archaeologists as well as anthropologists, and has frequently been discarded.⁴⁹⁵ Steward labelled ‘tribal society’ as ‘an exceedingly ill-defined catchall’.⁴⁹⁶ In its place, he proposed three different socio-political units – the nuclear family, the folk society, and the state⁴⁹⁷ – a suggestion that has not been implemented since, largely because ‘folk society’ is an empty non-concept. Clarke⁴⁹⁸ turned to ethnographic evidence to examine the usefulness of the term tribe for archaeological investigations. Among Bantu-speaking societies, he mapped overlapping ethnopolitical, linguistic, cultural, sub-racial, and techno-complex features. He showed that material culture can be shared over a large area, beyond the ethnopolitical unit of a tribe, and it is therefore difficult to detect it archaeologically.⁴⁹⁹ Renfrew, familiar with Clarke’s and Steward’s work, likewise avoided classification of small-scale non-state societies as tribal in the Aegean, which created a strong conceptual orientation for the follow-up studies:

‘The recognition of tribes in prehistoric Aegean society, and a fortiori the definition of tribal areas, is thus very much the *imposition of an a priori anthropological model upon the material* ... The archaeological unit ‘culture’ cannot be translated automatically into tribal terms: it is necessary to consider first what such an equation implies. The basic archaeological reality is the *village farming settlement*. These may have been linked to form segmentary tribes but, until we have positive evidence for pan-tribal sodalities, the suggestion is somehow speculative.’⁵⁰⁰

It remains a valid argument that the archaeological cultural unit cannot be easily translated into a tribal unit, since tribes may cut across material or linguistic boundaries.⁵⁰¹ Both kinship sodalities (clan, kindred, segmentary lineage) and non-kinship sodalities (age grades, warrior or ceremonial societies)⁵⁰² are very difficult to identify through the prehistoric record. Although Renfrew advanced the archaeological identification of chiefdoms within the EBA Aegean basin following his preference for neoevolutionary typology,⁵⁰³ Service was of a different opinion. At the time of his writing, Service was convinced that there is no obvious way to detect chiefdoms from the archaeological record:

‘Chiefdoms are not always demarked by a particular technological innovation which would set them off from tribes and states, but are characterized by their form of organization, most of which is not revealed in archaeological deposits; they can only be inferred or conjectured.’⁵⁰⁴

Service’s argument finds support in the ethnographic record. Polynesian chiefdoms arose in the absence of new technologies of production. In this case, the intensification of production and the chief’s utilization of surpluses for political means⁵⁰⁵ played a crucial role in the emergence of chiefdoms. The danger of prioritizing technology for the interpretation of social

⁴⁹⁴ Parkinson 2002, 2.

⁴⁹⁵ Steward 1955; Clarke 1968; Renfrew 1972.

⁴⁹⁶ Steward 1955, 53.

⁴⁹⁷ Steward 1955, 54.

⁴⁹⁸ Clarke 1968.

⁴⁹⁹ Clarke 1968.

⁵⁰⁰ Renfrew 1972, 366, italics mine.

⁵⁰¹ Clarke 1968; Fried 1975.

⁵⁰² Service 1962.

⁵⁰³ E.g. Renfrew 1972; Renfrew et al. 1974.

⁵⁰⁴ Service 1962, 114.

⁵⁰⁵ Malinowski 1922; Sahlins 1963; Firth 1967.

organization (e.g. that all metal-using societies should be organized into chiefdoms⁵⁰⁶ leads to 19th-century evolutionary tendencies to classify societies solely based on technology instead of the relations of production.⁵⁰⁷ Ethnographic studies have shown that metal-using societies cannot be associated with any particular type of social organization, since a smith's socio-political integration depends on local contexts.⁵⁰⁸ Equally, the evidence of settlement hierarchy as an indicator of chiefdoms should be questioned. Before concluding that a two-tiered settlement hierarchy necessarily displays evidence for 'central places' surrounded by 'smaller sites', a core predisposition of centre-periphery theory, it should be considered whether this may be the result of seasonal or post-marital movements, group fission and fusion, etc.⁵⁰⁹ A settlement hierarchy in the case of small sites (below 2 hectares) may, in fact, be contested on methodological grounds, since ethnographical examples from the Papua New Guinea highlands, the Himalayas, and the Upper Amazon indicate ample evidence for settlement hierarchies without political centralization.

In the Aegean basin, prehistorians today use concepts that do not come from either archaeology or socio-cultural anthropology. The term 'cultural koine' is used by Kouka⁵¹⁰ to refer to similarities in house architecture, fortifications, communal buildings, and material cultures (such as pottery and metal artefacts) between the eastern Aegean islands and coastal sites in western Anatolia in EBA 1/2 (3000–2650 BC). She used this term without an explanation of what 'cultural koine' actually means, and how it contributes to archaeological analyses or to understanding of the societies in question. The term 'cultural koine' is borrowed from linguistics, where it denotes the emergence of a new language following contact between speakers of different dialects of the same language. However, Kouka applies it to a shared material, not linguistic, culture in the eastern Aegean, in which the concept denotes shared architectural traits across the eastern Aegean islands and the coastal parts of western Anatolia during the EBA 1/2.

In socio-cultural anthropology, similar concepts are used to refer to regions in which cultural or economic confluence leads to shared similarities over distinct geographical locations. For example, Raymond Firth, in his rich qualitative and quantitative ethnographic study of Malay fishing communities, observed that the fish trade (including the production of nets, boats, and other items for fishing) led to intensive interdependence between island and mainland Malay and non-Malay communities. He showed that because of the fish trade,⁵¹¹ 'the relationships stretched out to embrace in one network at least half a dozen regions: Java, Sumatra, Borneo, Siam and Indo-China',⁵¹² which indicates that the fish trade cut across the existing political boundaries and instead created 'these regions as one organic economic unit'.⁵¹³

The key difference between Firth's notion of the 'organic economic unit'⁵¹⁴ and Kouka's 'cultural koine'⁵¹⁵ lies in our understanding of political organization. Whereas Firth understood that the Malay 'organic economic unit' cuts across the political boundaries and therefore encompasses a variety of political bodies, Kouka equated the EBA 'cultural koine' with shared political organization, here, EBA 1 chiefdoms.⁵¹⁶ Nevertheless, Kouka's analysis of EBA 1

⁵⁰⁶ Renfrew 1972.

⁵⁰⁷ Marx 1867.

⁵⁰⁸ Rowlands 1971.

⁵⁰⁹ Cameron 2013.

⁵¹⁰ Kouka 2002, 300; Kouka 2013, 576; Kouka 2016a, 210.

⁵¹¹ The 'fish trade', as described by Firth, included Malay fishers, Malay and non-Malay (e.g. Chinese) intermediaries or mediators, fishing boat and fishing net craftspersons, and consumers in near and distant, island and mainland, coastal and hinterland villages and towns.

⁵¹² Firth 1946, 12.

⁵¹³ Firth 1946, 12.

⁵¹⁴ Firth 1946, 12.

⁵¹⁵ Kouka 2002, 300; Kouka 2013, 576; Kouka 2016a, 210.

⁵¹⁶ Kouka 2016a.

Cycladic, eastern Aegean, and western Anatolian sites makes a significant contribution to understanding the shared socio-economic traits within this ‘cultural koine’.

The second term which offers an alternative classification of societies that are neither hierarchical nor ‘egalitarian’ is heterarchy, a concept borrowed from cybernetics, but redefined for archaeological purposes. Crumley defines heterarchy as:

‘The relation of elements to one another when they are unranked or when they possess the potential for being ranked in a number of different ways. For example, power can be counterpoised rather than ranked. Thus, three cities might be the same size but draw their importance from different realms: one hosts a military base, one is a manufacturing center, and the third is home to a great university.’⁵¹⁷

Recently, Horejs⁵¹⁸ proposed this type of social organization for EBA 1 Çukuriçi Höyük, based on the analysis of weights found at Çukuriçi Höyük resembling those used in the Near East. Others refer to heterarchical social organization in terms of house societies,⁵¹⁹ in which houses compete between each other and do not conform to any ‘conventional’ forms of kinship organization. With reference to the political economy of non-state societies, a heterarchical organization might be interpreted and understood as loosely corresponding to both the Melanesian *big man* forms as well as the great man models of society (see Chapter IV), in which power is distributed heterogeneously rather than in a centralized manner.⁵²⁰ For example, among the Baruya, a great cassowary hunter, a great shaman, and a great salt maker were not one but multiple persons (including their competitors), and therefore, depending on the nature of the task, some fields of prestige and power shifted between these senior male members of the Baruya. In short, the term heterarchy includes a ‘plurality’ (heter-) of power (-archy) that indeed corresponds to a limited number of different ethnographic models with internally diverse logics of reproduction.

If ‘the addition of the term heterarchy to the vocabulary of power relations reminds us that forms of order exist that are not exclusively hierarchical and the interactive elements in complex systems need not be permanently ranked relative to one another,’⁵²¹ then heterarchy may well correspond to an overarching, inclusive category for big man and great man societies (see section II.1 above). In the latter two models of non-state social organization, the special positions of certain actors are not permanently ranked but could be ranked in several ways, depending on the task or activity performed. For the purpose of this discussion and as an exercise in translation between non-socio-cultural anthropological concepts, I draw upon a local scale of heterarchy, resembling Crumley’s initial lively depiction of a heterarchical principle: ‘a spiritual leader might have an international reputation but be without influence in the local business community.’⁵²²

For example, among the Baruya, the *tsaimaye* – the salt maker – possessed the necessary technical and magical secrets for salt making, but needed to hunt and farm like everyone else. Only when he set out to work, which is for five days and five nights in a year to watch over the fire in the kiln, did the *tsaimaye* separate himself from everyday life.⁵²³ Knowledge of magical and technical secrets for salt making did not entitle him to either decision-making powers or possession of more salt. Whereas a *tsaimaye* was in charge of a crucial step for the production of salt – among the Baruya, a precious object for use and exchange – for the rest of the year

⁵¹⁷ Crumley 1995.

⁵¹⁸ Horejs 2016b.

⁵¹⁹ González-Ruibal 2005; González-Ruibal – Ruiz-Gálvez 2016.

⁵²⁰ For a summary of dialectical correspondence between heterarchical social organization and a great man society model of social organization, see Cveček – Horejs 2021.

⁵²¹ Crumley 1995, 3.

⁵²² Crumley 1995, 3.

⁵²³ Godelier 1986, 132.

he was a farmer and a hunter. This is the first example of how, within great man societies, as described among the Baruya, specialized craftsmanship does not encompass a permanent hierarchy and a permanent material break from everyday life but only a temporary one, which was symbolically accompanied by an overarching, more enduring boost to personal prestige. That applies not only to the salt maker, but also to a shaman, and great hunters among the Baruya, who, based on their knowledge and skills, take up only temporary leading positions that benefit the local community.

The second example of a temporary leading position could be seen from the Siuai, here representing big man societies. As several scholars have noted, a big man neither represents a central political office and political title nor any permanent hierarchy.⁵²⁴ As personal prestige in these societies is not inherited but achieved, in theory all men may compete in mobilizing relatives, friends, and neighbours for hosting feasts, as observed by Douglas Oliver.⁵²⁵ The power of big men, therefore, is not permanent but shifts through competition between various big men on the local and regional level. And whereas big men do gain prestige during short periods of feasting, for the rest of the non-feasting period their decision-making powers reside exclusively within a household. In addition, they remain symbolically indebted to those who have supported them from outside their own household. Oliver has also reported that big men's houses may at times be larger than other houses. By contrast, the big man's diet remained the same as the rest of the local community,⁵²⁶ which further highlights the need to compare multiple lines of evidence for addressing either permanent hierarchies or heterarchical relations within the archaeological record.

Carole L. Crumley has argued that 'heterarchy is both a structure and a condition.'⁵²⁷ Although big man societies and great man societies differ crucially – whereas the achieved personal wealth defines a big man, the achieved personal prestige and knowledge define a great man – the common denominator in their social organization is a lack of permanent centralized political office and permanent hierarchy that coexist with temporarily ranked social positions, and, as a consequence, underlying hierarchies between genders as well as within one gender based on age. This structural similarity between big man and great man societies also coincides with conditions in how to establish temporary ranking positions within a community, a trait that, according to Carole L. Crumley, defines heterarchical relations of power.⁵²⁸ Both wealth and personal knowledge could be acquired in a big man and great man society. In the case of big man societies, a man would need to ask his family, friends, and neighbours to support him in feasting to become a big man, whereas to become a great man such as a salt maker within the Baruya great man society, he had to 'ask an experienced maker and persuade him to share his knowledge.'⁵²⁹ In both cases, a person's agency was a condition that enabled him to either establish a network of supporters or to acquire new knowledge that could grant a few actors some temporary personal prestige. Spatial and temporal limits of ranking that characterize heterarchy can now be translated to socio-cultural anthropological models of big man and great man societies.

With reference to EBA 1 western Anatolia, concepts such as 'cultural koine' and heterarchy should therefore not be thought of as opposing concepts for this period and region. Although one indeed prioritizes interregional similarities ('cultural koine') and the other inter- and intra-regional differences (heterarchy) between EBA 1 sites, they can be useful for understanding (non-)shared socio-political arrangements within the EBA 1/2 Aegean basin. However, socio-economic links and shared material evidence does not imply that these societies were

⁵²⁴ Oliver 1950; Sahlins 1963; Lederman 2015.

⁵²⁵ Oliver 1955, 105–106.

⁵²⁶ Oliver 1955, 105–106.

⁵²⁷ Crumley 1995, 4.

⁵²⁸ Crumley 1979; Crumley 1987; Crumley 1995; Crumley 2007.

⁵²⁹ Godelier 1968, 132.

organized into the same political structure, as Firth⁵³⁰ showed for Malay fishers or Clarke⁵³¹ for Bantu groups.

Despite the much richer ethnographic collection of decentralized tribes than chiefdoms, the concept of tribe has been a contested analytical unit within socio-cultural anthropology. At the end of the 19th and the beginning of the 20th century, the term tribe was abused due to the colonial agenda of addressing non-state societies outside the Western premises as primitive and underdeveloped in terms of technology and even mental capabilities, and as inherently different from states.⁵³² Neoevolutionist scholars have used it without these erroneous ideological predispositions as a comparative category of socio-political organization of unrelated societies.⁵³³ Still, some contemporary scholars continue to argue that tribe should be relegated to the dustbin of anthropological concepts, due to its colonial, ethnocentric legacy and uselessness as an analytical tool.⁵³⁴ Some scholars have even questioned the existence of the tribe, except for some very specific contexts, such as the secondary effect of a group's external contact with a state.⁵³⁵ Others saw it as an incoherent category as it refers to a 'vast number of primitive societies juxtaposed in large congeries without clear boundaries'.⁵³⁶

Instead of the disputed category of tribe, some scholars have suggested thinking instead of 'communities'⁵³⁷ or a 'principality'.⁵³⁸ Most commonly, today use of the term tribe is interchangeable with the term 'ethnic group',⁵³⁹ a generally accepted but 'no less vague term',⁵⁴⁰ as Cheikh stated recently in *The International Encyclopedia of Anthropology*. I agree that the proposed substitution of terminology does not resolve the empirical issues it addresses.⁵⁴¹ Whereas the concept of a tribe may be useless for contemporary research even in some post-colonial settings, it may be unavoidable in others, such as the Arabian Peninsula, some regions of Pakistan and Afghanistan, India, Sudan, etc. Therefore, I acknowledge that the analytical concept of tribe as a category of socio-political organization should remain on the research agenda within the fields of archaeological anthropology, some contemporary anthropology, and history, liberated from its ideological connotations and facilitating comparative, cross-cultural, and diachronic research.⁵⁴² However, it should and can only be useful if we understand tribes as a 'family of sociopolitical forms',⁵⁴³ or what I refer to as a fuzzy category in the section below. It is not the name change that truly changes our perception of concepts. Since the signifier (i.e. symbol) always entails the signified (i.e. a class of objects), it is because of their conventional relationship and not a logical one. A change in this relationship would not only affect the system, but also other concepts in their relation. For example, if a tribe is constituted of households that build up a village and subsequently a tribe, then both households and villages should be understood in relation to tribes (see section II.1). As the starting point, we should conceptualize tribes for our present purposes as a fuzzy category or a family of socio-political organization applicable to sedentary non-state societies as discussed below,

⁵³⁰ Firth 1946.

⁵³¹ Clarke 1968.

⁵³² Morgan 1877; Morgan 1881.

⁵³³ Service 1962; Sahlins 1968.

⁵³⁴ Sneath 2007; Blumi 2010; Sneath 2016. For a detailed discussion of the term 'tribe', its problematic history and its possible usage in today's and future socio-cultural anthropology, see Sneath 2007; Gingrich 2015b.

⁵³⁵ Fried 1975.

⁵³⁶ Godelier 1977, 89.

⁵³⁷ Blumi 2010.

⁵³⁸ Sneath 2007.

⁵³⁹ Barth 1969.

⁵⁴⁰ Cheikh 2018, 6204.

⁵⁴¹ Gingrich 2015b.

⁵⁴² Gingrich 2015b.

⁵⁴³ Rosen 2016, 3.

before changing our corresponding understanding of subunits such as households and villages, discussed later in the book.

II.3. Understanding Tribe as a ‘Fuzzy’ Category

As the term tribe is a largely disputed category within socio-cultural anthropology and archaeology alike, the third section of this chapter proposes thinking of tribes as a family of concepts that includes both decentralized and centralized socio-political constellations that come into being through several different ways of imagining, as outlined in the first section of this chapter. With this approach, we could acknowledge multiple pathways towards increasing and decreasing social complexity and social inequality rather than just one. Moreover, we may also recognize that sedentary, non-state, non-literate societies differ with regard to their social inequality, gender relations, and ways they are ‘imagined’ to reproduce themselves as a society. By treating them as models, or ‘abstracted sociopolitical types’⁵⁴⁴ we can acknowledge their possible coexistence in time and space, as well as their ability to reimagine and transform themselves in multiple ways, without drawing conclusions applicable for the whole (archaeological) region. Instead of building a single model based on the aggrandizing behaviour of a single individual, as proposed by Brian Hayden, we should recognize that aggrandizers are not a universal feature among more or less sedentary transegalitarian societies or tribal, imagined communities. Aggrandizers such as big men were only a shared feature among one model of socio-political constellation among sedentary tribal communities, namely among ‘big man societies’, while lacking in other socio-political forms. Moreover, the ‘aggrandizer’ individuals such as big men described above are also not as individualistic as Brian Hayden⁵⁴⁵ has portrayed them. Big men gained their renown by serving and giving back to the community. By outlining the presentist understanding and current debates on tribes within socio-cultural anthropology and prehistoric archaeology, this section provides a grounded argumentation of why and how we should, could, and, in a way, must keep tribes on the archaeological anthropological agenda, in this ‘fuzzy’ constellation.

Understanding tribe as a ‘fuzzy’ category that encompasses decentralized models such as great man societies,⁵⁴⁶ big man societies,⁵⁴⁷ segmentary lineage systems⁵⁴⁸ and politically centralized chiefdoms with and without a conical clan,⁵⁴⁹ allows this research to consider a wide range of models of social organization to be tested against the archaeological record which were outlined in the introductory section. This approach has two advantages for prehistoric research. Firstly, reading ethnography across these different models avoids technological determinism, in which material culture necessarily determines a group’s social organization. Instead, it emphasizes the relations of production – the social, economic, and technological aspects of production – that define a group’s social organization. Secondly, the simultaneous consideration of decentralized and centralized forms of tribe necessarily implies the possibility of the temporal and spatial coexistence of different models of social organization and modes of production during the EBA in the Aegean basin.

⁵⁴⁴ Sahlins 1963, 286.

⁵⁴⁵ Hayden 1995.

⁵⁴⁶ Godelier 1986a; Godelier 1991.

⁵⁴⁷ Oliver 1955; Sahlins 1963; Godelier – Strathern 1991; Lederman 2015.

⁵⁴⁸ Evans-Pritchard 1940; Bohannon – Bohannon 1953; Bohannon 1955; Sahlins 1961; Dostal 1983b; Scott 2009; Burnham 2015.

⁵⁴⁹ Malinowski 1922; Malinowski 1929; Malinowski 1935; Firth 1951; Sahlins 1958; Firth 1959; Sahlins 1963; Sahlins 1968; Earle 1978; Carneiro 1981; Firth 1983; Johnson – Earle 2000; Earle 2002.

A tendency to classify societies into the same model of social organization within a particular period or region persists among researchers in the EBA Aegean or Aegean basin.⁵⁵⁰ However, the insights from socio-cultural anthropology point to a different scenario. One of the most famous cases demonstrating the contemporaneous coexistence of different types of social organization can be drawn from Melanesian big man societies and Polynesian chiefdoms. The Trobriand Islands, located in western Melanesia, a region where big man societies were a ‘typical’ and predominant social organization, were organized into a chiefdom system at the time of fieldwork,⁵⁵¹ which was initially considered to be ‘unusual for Melanesia’.⁵⁵² Within Melanesia, some of these big man societies were later identified as great man societies,⁵⁵³ which clearly indicates that multiple socio-political constellations can coexist within a given region.

Another case can be drawn from the Swat Valley in Pakistan. Frederik Barth’s research, conducted in the 1950s, showed that sedentary, multi-caste, lowland Pashto-speaking Pathans practised plough agriculture and specialized craft production. Their landholding was organized through unilineal descent groups and an established coresidence with highland Gujars. These were less hierarchically organized nomadic herders breeding cattle, sheep, goats, and buffalos, practising little agriculture and outmarriage.⁵⁵⁴ Even though Pathans owned the highlands exploited by the Gujars, the Pathans found this land useless and difficult to cultivate. Barth⁵⁵⁵ argued that the symbiotic economic relations between two different ethnic groups, relying on different modes of production and distinct social organization, are possible when two distinct groups exploit different ecological niches.

The final example, taken from recent prehistoric research, documented the contemporaneous coexistence of early farming communities (e.g. Boncuklu) with foraging communities that resisted farming (e.g. Pınarbaşı) during the mid-9th millennium BC.⁵⁵⁶ This evidence showed that the spread of farming in central Anatolia was not uniform, and refuted a faulty argument that ‘Neolithic societies came to coexist within Palaeolithic societies in time but not in space’.⁵⁵⁷ Moreover, it proves that the coexistence of not only different models of social organization, but also different modes of production are equally a thing of the present as of the past. These three cases highlight the importance of avoiding broad generalizations of a particular or ‘typical’ social organization model throughout a certain period or region in prehistory (e.g. chiefdoms in the Early Bronze Age Aegean⁵⁵⁸) without a detailed examination.

If we acknowledge that different models of socio-political organizations can coexist in time and space, then we can move on not only to what constitutes these different constellations, but also to how they coexist in the region. The question of whether chiefdoms emerged through peaceful or violent means has polarized the discourse on chiefdoms. These polarized discourses cannot be easily resolved and this is also not the aim here. I argue that it remains important to acknowledge multiple pathways towards the emergence of chiefdoms: through both peaceful and violent means, through the redistributive and non-redistributive economy, and through the presence or lack of long-distance exchange of prestige goods, among other things. The following section also identifies a further potential in exploring circumscription

⁵⁵⁰ Renfrew 1972, Kouka 2002.

⁵⁵¹ Sahlins 1963.

⁵⁵² Irwin 1983, 30.

⁵⁵³ Godelier 1986a; Godelier 1991.

⁵⁵⁴ Barth 1956.

⁵⁵⁵ Barth 1956.

⁵⁵⁶ Baird et al. 2018.

⁵⁵⁷ Service 1962, 110.

⁵⁵⁸ Renfrew 1972.

theory, which is missing in the current scholarly debates on the Aegean Early Bronze Age.⁵⁵⁹ As today's prevailing explanation for the emergence of chiefdoms in the Aegean builds upon Renfrew's EBA 2 'international spirit'⁵⁶⁰ and the long-distance exchange of prestige goods,⁵⁶¹ it may be fruitful to explore further any means of circumscription alongside the latter. This could include ecological circumscription (dwelling in naturally circumscribed areas), resource circumscription (dwelling close to rare and desired natural resources), or social circumscription (dwelling in densely populated areas).⁵⁶² All these three types of circumscription, possibly the basis for conflict between groups, may well exist alongside the peaceful, international-spirit-like earliest chiefdoms in the Aegean. The focus of this manuscript, however, is not on the emergence of chiefdoms. Instead, whether both centralized and decentralized societies coexisted in the region – and if so, how they coexisted during the Early Bronze Age – is within the realms of possibility that will be explored. It is important to bear in mind that chiefdoms are here considered as subversions of tribes (see section II.1 above) and not as a stage in social evolution, as chiefdoms have previously been considered in socio-cultural anthropology and archaeology.

The Lack of Circumscription Theory for the Emergence of Chiefdoms in the Aegean Basin

Although chiefdom social organization has often been promoted for the EBA Aegean, the model of chiefdom social organization was introduced relatively recently to socio-cultural anthropology, when Oberg⁵⁶³ identified it as a structural type in pre-Columbian America, south of Mexico in the 1950s.⁵⁶⁴ Soon after, a chiefdom became an evolutionary stage,⁵⁶⁵ and then a model of social organization.⁵⁶⁶ The emergence of the chiefdom has been discussed in a number of volumes dealing with the emergence of early states,⁵⁶⁷ in which chiefdom is discussed as a complex multi-village socio-political unit, either preceding the state or coexisting with it. However, the emergence of chiefdoms remains debated through two bodies of conflicting theories: voluntaristic and coercive.⁵⁶⁸ I agree with Godelier that 'it would be equally vain to try to imagine a durable power of domination and oppression based solely either on naked violence and terror or on the total consent of every member of society.'⁵⁶⁹ Instead, it is important to recognize that in 'all societies, including the most egalitarian classless ones ... a mixture of common and particular interests ... are constantly conflicting and compromising'.⁵⁷⁰

Carneiro, however, viewed the theories of warfare and the peaceful emergence of chiefdoms as theoretically mutually exclusive. Therefore, he classified the authors that support the emergence of chiefdoms by peaceful means as proponents of voluntaristic theories. These peaceful means for the emergence of chiefdoms include the intensification of production and a

⁵⁵⁹ A fruitful re-exploration of circumscription theory for the emergence of early states has recently been conducted in the valley of Oaxaca through archaeological evidence combined with agent-based modelling (see Redmond – Spencer 2012; Spencer – Redmond 2001; Spencer – Redmond 2004; Williams 2019).

⁵⁶⁰ Renfrew 1972.

⁵⁶¹ Friedman – Rowlands 1977.

⁵⁶² Carneiro 2012.

⁵⁶³ Oberg 1955.

⁵⁶⁴ Oberg identified six different typologies: (1) Homogeneous Tribes, (2) Segmented Tribes, (3) Politically Organized Chiefdoms, (4) Feudal Type States, (5) City States, and (6) Theocratic Empires (Oberg 1955, 473).

⁵⁶⁵ Service 1962.

⁵⁶⁶ Sahlins 1963; Sahlins 1968.

⁵⁶⁷ Carneiro 1970; Service 1975; Claessen – Skalník 1978; Feinman – Marcus 1998; Johnson – Earle 2000; Grinin 2004; Blanton – Fargher 2008.

⁵⁶⁸ Carneiro 1970; Carneiro 1988; Carneiro 2012.

⁵⁶⁹ Godelier et al. 1978, 767.

⁵⁷⁰ Godelier et al. 1978, 767.

redistributive economy,⁵⁷¹ irrigation,⁵⁷² the exchange of prestige goods,⁵⁷³ or the establishment of bottlenecks in the resource flow through the emergence of attached specializations, resource ownership, and specialized transport⁵⁷⁴ under the chief's leadership. My approach largely follows Earle, who maintains that

‘Despite pointed criticism of evolutionary typologies, the chiefdom and related formulations provide a framework for comparative studies of evolution aimed at understanding the development of central decision-making hierarchies and social inequalities.’⁵⁷⁵

Although my own interest does not lie in a discussion of social evolution but in the social organization at the two sites of inquiry, there is a strong tendency to prioritize voluntaristic theories of chiefdoms, proposing that individual aggrandizers acted in their own self-interest and previously autonomous villages voluntarily surrendered their sovereignty to a higher political authority. However, evidence for any redistributive economy during EBA 1 is lacking in western Anatolia, apart from the hinterland site of Karataş. Therefore, the question of how and why chiefdoms arose in EBA 1 western Anatolia, if they did, remains unresolved.

This may be related to the absence of Carneiro's circumscription theory in the discussion on the emergence of chiefdoms in the EBA Aegean basin.⁵⁷⁶ Carneiro argues that multi-polity organizations, such as chiefdoms and states, always emerge by violent means and treats violence, not as a ‘mere hypothesis, but an established fact’.⁵⁷⁷ This conclusion is further supported by a number of ethnographic cases, and Carneiro⁵⁷⁸ differentiates between three different types of circumscription: environmental, resource and social circumscription. Firstly, environmental circumscription emerges where environmental features sharply delimit the area that simple farming communities could occupy or cultivate, and these can vary from narrow valleys, the sea, mountains, or deserts in different regions. These conditions, combined with population growth, lead to warfare and, consequently, political integration beyond the village level. Secondly, resource concentration may affect communities residing close to rich soils that enable the production of an abundance of food. These communities commonly sustain high reproduction rates, and when population growth reaches a critical point, it results in competition and warfare over land. This applies not only for habitable land that can be cultivated, but also for settlements close to natural resources such as obsidian, jadeite, tin, and other commodities which are naturally restricted but highly desirable. Thirdly, social circumscription refers to the filling of an area⁵⁷⁹ resulting in a high population density, and its effects may equally lead to conflict and consequent integration into chiefdoms.

In all of the above cases, the chiefly office comes into existence not as a central authority in charge of a redistributive economy,⁵⁸⁰ which has been severely questioned,⁵⁸¹ but through the introduction of a temporary war leader (or pendragon) who leads an alliance of several villages in conflict with a common enemy. If these efforts are victorious, then a temporary war

⁵⁷¹ Service 1962; Sahlins 1968; Renfrew 1972.

⁵⁷² Steward 1955; Wittfogel 1976.

⁵⁷³ Friedman – Rowlands 1977.

⁵⁷⁴ Earle 2002; Earle 1998b; Earle et al. 2015.

⁵⁷⁵ Earle 1987.

⁵⁷⁶ Carneiro 1981; Carneiro 1988; Carneiro 2012.

⁵⁷⁷ Carneiro 2012, 14.

⁵⁷⁸ Carneiro 1981; Carneiro 1988; Carneiro 2012.

⁵⁷⁹ The ‘filling of an area’ here refers to multiple reasons, such as fission and the follow-up establishment of new settlements within the same area, increase in biological reproduction, or migration into a particular area.

⁵⁸⁰ Service 1962, Sahlins 1968, Renfrew 1972, Renfrew et al. 1974.

⁵⁸¹ Peebles – Kus 1977, Carneiro 1981, Earle 1998a.

leader may become a permanent chief of the allied villages. The chief then holds a political and military office.⁵⁸²

From the above discussion, the key role of the environment in the emergence of chiefdoms can be seen, and therefore coercive theories should be considered as plausible as voluntaristic ones for the emergence of chiefdoms in the EBA 1 Aegean basin. At the same time, my own understanding follows the proponents of historical ecology, who claim that we cannot treat the environment as a static, fixed entity with limited resources to which social groups adapt. Instead, anthropologists should recognize the multigenerational knowledge that arises through practice and facilitates the active management of the landscape, not only adaptation to it.⁵⁸³ Interaction with the environment within this study will be documented on a household level, which will provide information about the community and changes in diet or herding practices, and question the role of environmental circumscription. This approach allows us to pursue a dwelling perspective, fundamental to which is the recognition that the ‘production of life involves the unfolding of fields of relations that crosscuts the boundary between human and non-human’.⁵⁸⁴ Research collaboration between archaeologists and anthropologists has recently called for more work on the mode of household and village organization alongside ecological practices.⁵⁸⁵ This approach, combining household archaeology with household ecology and the domestic economy, is described in the following section.

In summary, the environment surrounding many Early Bronze Age sites in western Anatolia and Thessaly was limited in most cases by either surrounding mountains, rivers, and/or the seashore. Therefore, circumscription may be a topic that could be further explored in the future. Whether and how circumscriptive pressure promoted the emergence of chiefdoms during EBA 1 and 2 in the Aegean remains open. Until a systematic study on the effect of circumscription on the development of chiefdoms in the region is conducted, the question of circumscription will remain unresolved.

II.4. Preview: Domestic Economies and the Household Archaeology Approach

By acknowledging tribes as a fuzzy category, the fourth and last section of this chapter will deepen our understanding of domestic economies and household archaeology as pursued in this study. In the absence of a redistributive economy and specialized workshops within settlements, these (village) settlements could nevertheless be integrated into centralized socio-political constellations such as chiefdoms, but only if a special residence with visible, special features could be attested. Household archaeology or micro-scale archaeology may help us tackle this issue.

By looking at the localized perspective of households and comparing them to each other, we can test the evidence of *haute cuisine*,⁵⁸⁶ or the extent to which food was either shared or pooled within households. Another way remains to trace it through unusual architecture: e.g. a larger house, an unusual installation inside the house, pointing towards a chiefly or ritual dwelling. The concentration of prestige goods within a particular household, repeated in different settlement phases, could be another such archaeological marker for a possible chiefdom organization. But most important of all would be continuity of these ‘irregularities’, within the same houses, between different settlement phases, to support the inherited status and the existence of chiefdoms within the Domestic Mode of Production. If this is not the case

⁵⁸² Carneiro 1981; Carneiro 1988; Carneiro 2012.

⁵⁸³ Balée 2002; Balée – Erickson 2006.

⁵⁸⁴ Ingold 2005, 504.

⁵⁸⁵ Wengrow – Graeber 2018, 238.

⁵⁸⁶ Goody 1976; Goody 2006.

and the evidence indicates households mobilizing different types of ‘prestige’ that could shift within settlement phases and between house use lives, then it is more appropriate to consider a more or less decentralized ‘heterarchical’ social organization, in which the same village group may consist of households or persons that pool their renown either from different material items, knowledge, or skills that are either unranked or ranked in many different ways (see section II.2 above).

Household archaeology, a new approach for analysing data from settlement sites, emerged at the beginning of the 1980s in response to processual archaeology, which was preoccupied with diachronic investigations into non-state or early-state societies along evolutionary lines. Wilk and Rathje, who coined the term ‘household archaeology’ with the aim of inferring economic behaviour from the material record, define the household as

‘The most common social component of subsistence, the smallest and most abundant activity group. This household is composed of three elements: (1) *social*: the demographic unit, including the number and relationships of the members; (2) *material*: the dwelling, activity areas, and possessions; and (3) *behavioral*: the activities it performs.’⁵⁸⁷

The main aim of household archaeology was to ‘bridge the existing ‘mid-level theory gap’ in archaeology’⁵⁸⁸ by examining theories of change in household organization instead of looking at ‘ceramic types’ across a number of sites to address the grand theories, such as the rise of the state.⁵⁸⁹ The household archaeology approach is deeply rooted within the socio-anthropological interest in domestic units that emerged in the 1950s, which questioned the assumption of the static manner of domestic groups and investigated changes within and between households spatially and diachronically.

The view of the household as a dynamic, emergent, processual, and cyclical phenomenon, shaped through everyday practices, emerged as a new analytical category within socio-cultural anthropology in the late 1950s,⁵⁹⁰ which generated a stronger interest in domestic economies. Goody argued that changes in technology, namely the introduction of the plough across Eurasia and the shift from human labour-intensive to labour-extensive agriculture assisted by animal power, led to the production of agricultural surpluses across Eurasia during the Bronze Age.⁵⁹¹ This facilitated the emergence of full-time specialists, detached from food production, and the emergence of stratified societies in an urban setting reproduced through local and kinship endogamy. Building upon Marxist theories that the (sexual) division of labour by gender depends on the type of farming, and that relations of production depend on means of production, Goody also argued that the shift from horticulture to agriculture brought about changes in domestic organization. Female power declined, whereas male power gained in importance as female labour in gardens was replaced by men in charge of plough agriculture in fields and male ownership of large stock. The increase in productivity generated by the introduction of ploughs (or ards) divided groups into ruling groups, which were not involved in food production, and producers. The latter, in Eurasian villages, were further ranked as rich and landed vs. poor and landless peasants. Before the invention of plough agriculture, sedentary societies practising small-scale cultivation and animal husbandry seemingly followed different principles. However, a comprehensive theory rooted in ethnographic cases from those latter societies was still lacking within socio-cultural anthropology, and to an extent, these views still disregarded the emergence of craft specialists.

⁵⁸⁷ Wilk – Rathje 1982, 617, italics theirs.

⁵⁸⁸ Wilk – Rathje 1982, 617.

⁵⁸⁹ Wilk – Rathje 1982.

⁵⁹⁰ Fortes 1971 [1958]; Goody 1971 [1958]a; Goody 1972.

⁵⁹¹ Goody 1976.

To date, the best model to discuss the labour organization within households or what households do in non-state, non-ploughing societies, remains what Sahlins⁵⁹² termed the Domestic Mode of Production. This type of production stands for the gendered and age-based division of labour within households, in which households do not support any full-time specialists and are not geared towards overproduction but rather towards ‘underproduction’. Nevertheless, the surplus can emerge in different spheres – not only subsistence, but also through game hunting, the collection of wild plants, and employing crafts, which can be variously integrated into the Domestic Mode of Production. Based on surpluses generated in some of these economic spheres, crafting and other centres may emerge, which can be further used for analysing archaeological data. A short overview of Sahlins’s Domestic Mode of Production model will be discussed below.

Domestic Mode of Production Beyond the Stone Age

Two exceptional publications emerged in 1972. These shaped specific fields of archaeology and social anthropology, and continue to play an important role in this study. Renfrew published his seminal work *The Emergence of Civilisation*, a systematic overview of the Aegean Late Neolithic and Early Bronze Age societies, and socio-cultural anthropology benefitted from Sahlins’s advancement of substantivist theories for a domestic economy in *Stone Age Economics*. By theorizing about previously published data on hunter-gatherer, horti-/agricultural, and pastoral groups, Sahlins’s comparative work turned hunter-gatherer groups previously perceived as poor into the ‘original affluent society’.⁵⁹³ More importantly, Sahlins developed his theory of the Domestic Mode of Production (DMP hereafter), a model primarily based on Chayanov’s rule⁵⁹⁴ and an extension of Polanyi’s householding principle.⁵⁹⁵

Prior to Sahlins, Polanyi had argued that householding should not be perceived as an older economic system than reciprocity and redistributive systems, since ‘the practice of catering for the needs of one’s household becomes a feature of economic life only on a more advanced level of agriculture ... its pattern is the closed group’.⁵⁹⁶ It is unclear what Polanyi defines as a ‘more advanced level of agriculture’, and Polanyi himself was ambiguous about the principle of householding.⁵⁹⁷ For Sahlins, the principle of householding – the term is avoided by Sahlins in his writing⁵⁹⁸ – or DMP can only be sustained through three systematically interrelated elements: a ‘small labour force differentiated by sex, simple technology, and finite production

⁵⁹² Sahlins 1972.

⁵⁹³ Sahlins showed that hunter-gatherers generally enjoy more leisure time and dedicate less effort to food acquisition than sedentary farming groups.

⁵⁹⁴ In the 1920s, the Russian agronomist Alexander Chayanov developed a theory that members of a peasant household would work as hard as they needed in order to meet the subsistence needs of the family, and no more. This implies that a peasant community by itself would not transform into a capitalist system generating a surplus for exchange except in cases where external factors impact the community (Chayanov 1966, Sahlins 1972).

⁵⁹⁵ Polanyi 1944. Polanyi defined three general types of economic systems in pre-market societies: a *householding* system based on the principle of autarky, in which individual households produce for their own needs; a *reciprocity* system based on the principle of symmetry, in which societies are linked through reciprocity of gifts; and a *redistributive* system based on the principle of centrality, in which trade and production are organized by a central authority/a tribal leader (Polanyi 1944). According to Polanyi, prior to capitalism, all societies were characterized by one or a combination of the three economic systems (householding, reciprocity, redistribution).

⁵⁹⁶ Polanyi 1944, 55.

⁵⁹⁷ Gregory 2009.

⁵⁹⁸ Sahlins, acknowledged his indebtedness to Polanyi (see footnote 3 in Sahlins 1972, 188). However, Sahlins did not adopt the term *householding* but coined a new one, the so-called DMP as well as departing from Polanyi’s threefold scheme of principles of integration (e.g. householding system, reciprocity system, and redistributive system).

objectives', which makes this system an 'anti-surplus system'.⁵⁹⁹ Within the DMP model, simple technology refers to Neolithic or Stone Age technology. Thus, sedentary Neolithic communities are generally motivated by meeting the subsistence needs of a domestic unit in which production is not separated from consumption. Also, over-production or over-exploitation of available resources is absent in an overall sense, as such a society is not growth-oriented.⁶⁰⁰ Households within the DMP do not support any full-time, but may accommodate part-time specialists. This ostensibly makes the self-sufficiency of DMP households possible. Notwithstanding the theoretical self-sufficiency of DMP domestic units, Sahlins acknowledged that

'The households of primitive communities are not usually self-sufficient, producing all they need and needing all they produce. Certainly, there is exchange. Even aside from the presents given and received under inescapable social obligations, the people may work for a frankly utilitarian trade, thus indirectly getting what they need.'⁶⁰¹

This implies that the key criteria of more complex societies should not be analysed exclusively through exchange, as this is a cultural universal. Instead, the production and transmission of particular objects exchanged should be conducted on a local (single-site) but also regional level (multiple sites) for a thorough understanding of regional interdependency, beyond the domestic unit or household. If we look at both exchange and transmission, then we can follow two different and complementary flows within the DMP: spheres of surplus for exchange beyond households, and spheres of surplus for pooling within households. These spheres are simultaneously embedded in the economic activities of the DMP households, in which the members navigate between producing for mainly their own use but also producing for exchange.

Moreover, if we think of DMP households as loci of underproduction, in which households mostly produce for their own use, then it would, by definition, be impossible to imagine any centralized economy compatible with this type of (under)production. But this transformation or coexistence of the DMP with some elite control of specific goods (e.g. metal objects, game, trophies, etc.), is a possible key towards understanding the emergence of chiefdoms. The coexistence of the DMP with long-distance exchange of prestige goods is not necessarily linked to the emergence of crafting centres which are perfectly compatible with the DMP. The latter are not necessarily embedded into any elite-controlled long-distance trade. Such crafting centres may equally emerge in villages close to clay sources, salt plants⁶⁰² or copper-rich sediments, which could be utilized locally for both local consumptions and for long-distance exchange, without elite-controlled distribution of these items being necessary. And if the DMP stands for 'economies organized by domestic groups and kinship relations',⁶⁰³ how can the DMP be translated into material, archaeological data, if household archaeology's initial aim was to move beyond the study of kinship in archaeology?

Use of the DMP in Archaeology

The earliest attempts to (re)consider the DMP in archaeology were established in household archaeology, which emphasized the importance of identifying domestic activities within the household for assessing self-sufficiency or degrees of specialization between domestic groups. Scholars proposed an important distinction between *dwelling*s and *households*, since

⁵⁹⁹ Sahlins 1972, 82.

⁶⁰⁰ Sahlins 1972.

⁶⁰¹ Sahlins 1972, 83.

⁶⁰² The Baruya residing in Papua New Guinean highlands produced plant-based salt from locally available 'salt plants' (Godelier 1986), see Chapter VII.

⁶⁰³ Sahlins 1972, 41.

archaeologists do not excavate social units (such as households) but dwellings and artefacts.⁶⁰⁴ Therefore, for any deduction concerning households from the archaeological record, a researcher should follow key methodological steps. Firstly, dwellings should be inferred from the material record⁶⁰⁵ manifested through architecture (walls, buildings, and other physical structures), and secondly, households can only then be inferred from the dwelling units⁶⁰⁶ by analysing the clustering of activity zones.

This method allows for the testing of anthropological theories since established knowledge about the basic subsistence and economy of any society under archaeological examination (e.g. hunter-gatherers, sedentary horticulturalists, sedentary agriculturalists, and nomadic herders) allows the researcher to infer the kind of household units that were present. However, as I mentioned in the introduction, the ‘household’ is a problematic unit of study for mobile non-resident production groups (e.g. mobile hunter-gatherer societies). Since there is no ‘house’ in these types of societies, it is difficult to speak of households, similarly to the way in which the concept of the ‘international spirit’ was inappropriate for times when no nations existed. With regard to sedentary societies, as a topic of inquiry in this research, material evidence from dwellings and other settlement structures can be used to test against anthropological theories of householding practices.⁶⁰⁷ In this manner, households, as social units identified ethnographically, are not being imposed on the archaeological data, but rather used as a matrix against which archaeological material records can be examined. The results of such testing may then either (i) confirm the expected outcomes; (ii) refute what was previously seen as the most likely household organization; (iii) provide more contextualization for the degree of likelihood of one or another household organization; or (iv) propose another model of domestic organization, which has not previously been recorded among already existing ethnographic cases.

The DMP was extensively tested in an archaeological investigation of the Jutland area of Denmark during the Bronze Age. Results showed that this period can be categorized as a transitional period between chiefdoms and early states, through cycles of chiefly evolution and decline.⁶⁰⁸ Through diachronic research on the subsistence and political economies of Thy in Denmark, Earle demonstrated that the DMP played a crucial part in the Bronze Age chiefdom economy, which reaffirms Aristotle’s and Polanyi’s claims that the production of surpluses for exchange does not necessarily destroy the self-sufficiency of households.⁶⁰⁹ According to Earle, the DMP remained stable throughout the Bronze Age in Jutland, since most goods were produced and consumed at the household level; an exception to this being the elite-controlled, long-distance import of metal that altered political organization towards the integration of villages into chiefdoms.⁶¹⁰ Highly desirable metal agricultural tools were not produced locally in Jutland. Therefore, they needed to be acquired from outside, through the exchange of hides and other items produced locally within the Danish peasant societies. In this case, the chiefdoms emerged without the development of a redistributive economy of staple goods, but through the long-distance exchange of hides for metal. The DMP remained a stable mode of production through the cycles of decline and emergence of chiefdoms that were based on elite long-distance exchange of metals.⁶¹¹ With this research, Earle showed that Sahlins’s DMP may exist beyond the Neolithic or Stone Age, and that this mode of production may support centralized chiefdoms as well as decentralized tribal communities.

⁶⁰⁴ Wilk – Rathje 1982.

⁶⁰⁵ Wilk – Rathje 1982.

⁶⁰⁶ Wilk – Rathje 1982.

⁶⁰⁷ Wilk – Rathje 1982, 619.

⁶⁰⁸ Earle 2002.

⁶⁰⁹ Polanyi 1944, 56.

⁶¹⁰ Earle 2002.

⁶¹¹ Earle 2002.

In contrast to the constructive application of the DMP model within archaeology, socio-cultural anthropologists have criticized Sahlins's treatment of domestic groups in the DMP.⁶¹² According to some scholars, Sahlins treated domestic groups as given rather than acknowledging the kinship ties that constitute them. This would be a repetition of the mistake made by Marx: in an analogous manner, he also overlooked the importance of kinship for the reproduction of things and labour.⁶¹³ In the same vein, among archaeologists themselves, the theory of the DMP has been regarded as a neo-Marxist idealist account of the mode of production.⁶¹⁴ In a recent edited volume, the authors called for the retirement of the DMP 'for the sake of definitional clarity',⁶¹⁵ and instead suggested using Eric Wolf's distinction of three modes of production for archaeological research: *kin-oriented*, *tributary*, and *capitalist*.⁶¹⁶ Wolf's is a simplified version of Marx's model for deploying the worldwide evolution of social labour. Although such a call has the potential to restore the importance of kinship to prehistoric archaeology, I understand the DMP as a 'mode of subsistence', or 'householding', which will be scrutinized through the archaeological record under consideration here. My reading of Sahlins is, in a way, complementary to Polanyi's work, who initially discussed 'householding' as an ancient economic system, primarily embedded in kinship relations.

In addition, concepts related to the DMP may be further refined and improved through a subsequent level of analysis, by suggesting after the first series of analyses what kind of kinship correlates may or may not have corresponded to the DMP in question. While in a systemic way, the formation of the DMP generally presupposes kinship ties *a priori* for recruitment and alliances, in a methodological and analytical sense, the identification of any specific kinship correlations with a given DMP form may become an *a posteriori* step in the investigation. Moreover, conceptualizing a 'tributary' mode of production on any larger regional scale need not necessarily exclude that this may encompass DMP units on smaller-scaled, local levels.

Following the two steps to identify what kind of kinship we could expect and whether any specific kinship constellations could be read from the archaeological data, this inquiry into the EBA households draws from both the archaeological data available and socio-cultural anthropological interpretations of material evidence. As both sites of this inquiry are settlement sites, with ample evidence of houses, the study does not consider house societies as an ideal type of social organization.⁶¹⁷ Instead, houses are here perceived as a proxy for close social relations between persons, including kinship among others. Houses as *loci* of kinship⁶¹⁸ as well as a 'minimal social arena', in Victor Turner's sense,⁶¹⁹ where important socio-economic and socio-political decision take place, allow us to further explore the underlying rules of proximity and sharing between houses, rather than taking a house as an organizing principle or a model for social organization.⁶²⁰ What kind of kinship or rules of proximity were established at Çukuriçi Höyük and Platia Magoula Zarkou will be explored through household archaeology.

⁶¹² Gingrich – Schweitzer 2014, 30.

⁶¹³ Gregory 1984.

⁶¹⁴ Trigger 1993.

⁶¹⁵ Rosenswig – Cunningham 2017, 16.

⁶¹⁶ Wolf 1982, Rosenswig – Cunningham 2017. According to Wolf, the *capitalist mode of production* gained momentum in the 18th century. Before then, societies across the world were organized in either a *tributary* or a *kin-oriented* mode (Wolf 1982, 7). A *kin-oriented mode* of production is present in pre-state societies, in which kinship serves as the mediator of human labour and the only means to claim labour from another person. In the *tributary mode*, according to Wolf (1982), centralized or decentralized ruling elites extract the surplus from producers for managerial, defensive, and other purposes.

⁶¹⁷ For a detailed explanation of reasons for not treating house societies as an ideal type of social organization, see Chapter IV.

⁶¹⁸ Carsen – Hugh-Jones 1995; Sahlins 2013.

⁶¹⁹ Turner 1974, see Chapter III.

⁶²⁰ Gillespie – Cunningham 2000; González-Ruibal 2005; Boric 2008; Bami et al. 2016; González-Ruibal – Ruiz-Gálvez 2016; Kuijt 2018.

Although household archaeology was initially established to move away from discourses on kinship,⁶²¹ in my understanding, we cannot ascribe a house and its household activities a purely material(istic) and economic character, but should also recognize a house as a locus and ‘minimal social arena’ of kinship, both old and new. How kinship can be further addressed through household archaeology, complemented with a socio-cultural anthropological understanding of household economies, will be discussed below.

Household Archaeology and the Anthropological Contribution

Today, the well-developed and commonly applied approaches of household archaeology in Mesoamerica contrast with the emergence of a young field ‘becoming’ important in Eastern Mediterranean prehistory. Some exceptions to this are the recent pioneering studies of Neolithic households in Thessaly (Greece)⁶²² and Neolithic Southeastern Anatolia in Turkey.⁶²³ Within the EBA I Aegean basin, the earliest attempt at a household archaeology approach was undertaken at Troy⁶²⁴ and has proven to be fruitful for discussions of domestic units and local social organization. Within Near Eastern archaeology, the absence of household archaeology was attributed to difficulties in identifying household compounds,⁶²⁵ and the same can be said for the Aegean basin. Consequently, instead of detailed analysis of material remains within domestic premises, prehistoric archaeologists in the Eastern Mediterranean have largely focused on analysing house forms and settlement patterns from architectural perspectives.⁶²⁶ This allows the studying of the architectural remains beyond the local, bounded space of the excavated site. It also enables a comparison of house sizes, settlement patterns, and other architectural features on local, regional or supra-regional scales. Finally, it stimulates discussion regarding the uniformity and diversity of built space, and the (dis)similarities of the contemporary sites in question.

Both a macro-scale comparative settlement pattern approach and micro-scale household archaeology have their respective drawbacks. The former prioritizes the discussion of long-term changes (e.g. population growth, resource control, etc.) affecting the whole group, and less emphasis is given to short-term changes and diversity among different groups, often for the sake of discussing the evolutionary trajectory.⁶²⁷ By contrast, household archaeology prioritizes a ‘humanized reconstruction of the past’⁶²⁸ by looking at the intra-settlement relations through the local built environment. This bottom-up approach is based on local and micro-regional history, and thereby facilitates tackling the ‘big questions’ such as the principles of social organization from a localized perspective.

There is a large body of anthropological literature that can make a significant contribution to our understanding of prehistoric societies along with a household archaeology approach, including cross-cultural studies. Such studies can point towards general patterns and correlations between specific variables across samples. It has been shown that the size of domestic units correlates with two different types of neolocal post-marital residence. While in patrilocal societies the average living floor area is usually smaller than 550–600ft² (51.1–55.7m²), in matrilocal societies this area generally exceeds these dimensions.⁶²⁹ Follow-up studies have

⁶²¹ R. Wilk, pers. comm. 2017.

⁶²² Souvatzi 2008; Souvatzi 2014; Souvatzi 2012.

⁶²³ Özbal 2006; Özbal 2012.

⁶²⁴ Ivanova 2013; Ivanova 2016.

⁶²⁵ Özbal 2006, 321.

⁶²⁶ Christmann 1966; Renfrew 1972; Pullen 1985; Düring 2001; Kouka 2002; Erkanal 2011; Georgiadis 2012; Schwall – Horejs 2015.

⁶²⁷ Tringham 2015.

⁶²⁸ Tringham 2015, 219.

⁶²⁹ Ember 1973.

produced similar results.⁶³⁰ For sedentary and semi-sedentary societies – the focus of this study – the dimensions of domestic units have been adjusted to less than 43m² for patrilocal and more than 80m² for matrilocal societies.⁶³¹ Although the cross-cultural comparison of house floors was meant to contribute to the study of prehistory, it has not been widely implemented. In this regard, I agree with the proposal that ‘cross-cultural studies may be used for hypotheses but should not be the source of interpretation’.⁶³² However, cross-cultural anthropological studies may fruitfully inform archaeological interpretations.⁶³³ Therefore, based on the small size of domestic units at Çukuriçi Höyük and Platia Magoula Zarkou, we should expect a patrilocal residence pattern.

A recent cross-cultural study, which tested the correlation between food sharing and resource stress across 98 samples relying on a subsistence economy, confirmed that food sharing beyond the household is a socio-cultural universal. However, societies frequently affected by resource stress share food beyond the household more frequently, while in times of major environmental catastrophe, households instead tend to pool resources and not share beyond the household.⁶³⁴ In order to evaluate differences or similarities of dietary patterns between different households at each site, we should, then, expect a high variability of diet between households in times of environmental catastrophe, medium variability between households when environmental stress was not present, and a more uniform diet when the societies were frequently affected by environmental challenges. This allows us to look at diet within a framework of environmental conditions that play a major role in subsistence in non-state societies.

However, food in non-state sedentary societies should not be treated solely as a means for subsistence, but equally as a marker of rank and distinction. Goody argued that *haute cuisine* in Bronze Age Eurasia was another trait that distinguished an urban class of rulers from the peasants, in which the rulers enjoyed exotic food with complicated recipes and cooking techniques. On the one hand, testing for the presence of *haute cuisine* in a particular household or household cluster may confirm the existence of elites at each of the two sites. On the other hand, a homogeneous diet across the settlement and an absence of *haute cuisine* should not be taken as a marker of the absence of social inequality, since different types of cuisine may support the same socio-political organization:

‘Differences between the centralized societies of Africa and Eurasia are highlighted in the household economy. While Eurasia had a *haute cuisine* as well as a lower *basse cuisine*, Africa had neither; its cooking was demotic ... intermarriage prevented too great a separation, too complete an isolation, to develop between the strata. There was broad homogeneity in marriage, cooking, and other aspects of culture even though the strata had differentiated access to political office.’⁶³⁵

In this study, therefore, food will be treated as a marker of distinction but also as a proxy for social relations. Food sharing between households must have been of significant importance as local residential groups throughout (pre)history dealt with seasonal droughts in the Aegean.⁶³⁶ Whether this has resulted in pooling (indicating major catastrophes) or sharing (indicating seasonal droughts) between domestic groups at a particular settlement will be discussed through zooarchaeological data. A third, possible factor for contextualizing zooarchaeological records consists of a possibility that certain food items may have been consumed only by one social

⁶³⁰ Divale 1977; Peregrine 2001.

⁶³¹ Divale 1977; Ensor 2013.

⁶³² Ensor 2013, 60.

⁶³³ Ember – Ember 1995; Peregrine 2001; Ensor 2021.

⁶³⁴ Ember et al. 2018.

⁶³⁵ Goody 1976, 104.

⁶³⁶ Halstead 1995.

subgroup, e.g. by men or women, adults or children.⁶³⁷ Such nuanced inequalities of consumption within houses, however, remain challenging to address through macroscopic zooarchaeological data. As a socio-cultural anthropologist, I cannot deny differences and possible inequalities within households in spheres of consumption, but discuss such inequalities only in cases that indicate possible inequalities between or within houses and household members. Moreover, this study also leaves open the possibility that some foods, such as game or other collected wild plants, could be items of regional competition for achieved or inherited status, which can, furthermore, be addressed through zooarchaeological material. If we consider that a certain household may gain a local or regional reputation based on diet or accumulation of any food items, then this consideration must, furthermore, be taken into account when discussing the zooarchaeological, mostly statistical interpretations, through people-centred, local, historical perspectives.

This last section of the chapter has established the anthropological approach in this study, which builds upon the micro-scale analysis of household archaeology, complemented with cross-cultural studies of ethnographic material, and the so-called ‘uncontrolled’, qualitative comparison of archaeological and ethnographic evidence, to address local histories at both sites. Regarding the cross-cultural studies, it should be noted that these will only serve as the major guideline rather than the means for detailed interpretations. To truly understand the local histories at the two sites being considered in this study, qualitative comparison with more detailed ethnographic cases will be preferred.

Chapter Summary and Conclusion

In this literature review, I aimed to demonstrate that despite dealing with prehistoric data from anthropological perspectives, my main objective is not to contribute to the studies of social evolution, but rather to dwell upon local history. If one’s habitus is the product of history, then the material culture being examined should likewise be treated as a form of local, personal, and collective histories at each site under investigation. Such an approach separates this study from the neoevolutionary conceptions, which, at least within the EBA Aegean, have primarily been concerned with the search for the predecessors of early states, rather than focusing on local and micro-regional, socio-cultural historical developments. I have shown in section II.2 that the evolutionary model of *band-tribe-chiefdom-state* has resulted in a bias towards chiefdom social organization in the EBA Aegean basin⁶³⁸ since, according to the neoevolutionary model, chiefdoms necessarily predate the emergence of early states. Consequently, much less attention has been paid to the examination of decentralized tribal constellations within this period and region. The strong reliance on neoevolutionary models has already been discussed by Pullen, whose critique of Renfrew’s approach I consider comprehensive and viable for the avoidance of similar pitfalls in my own work.⁶³⁹

Another problematic, albeit very common, tendency has been pointed out regarding the classification of various societies into the same social type of chiefdom across the ecologically diversified Aegean basin during the EBA. Both rich ethnographic data and recent archaeological work support the contemporary and spatial coexistence of different modes of production/subsistence and models of social organization within a particular region. Therefore, it is important to recognize that chiefdoms could coexist with decentralized tribal constellations, or that sedentary farming communities could develop a symbiotic relationship with pastoral groups in various constellations of regional and supra-regional heterogeneity and diversity. For that

⁶³⁷ For a detailed discussion of these possibilities, see Chapter VII.

⁶³⁸ E.g. Renfrew 1972.

⁶³⁹ Pullen 1985.

reason, I approach tribe as a ‘fuzzy’ category, as a common denominator for a wide variety of social organizational models, including segmentary lineage systems, great man societies, big man societies, and ranked chiefdoms (sometimes also including conical clans) that could be applied to more or less sedentary or mobile groups. The fact that DMP or kin-based modes of production may be the basis of all of the above models does not imply that these societies would be entirely self-sufficient (neither for reproduction nor for subsistence). Therefore, an understanding of exchange will be included alongside scrutinizing household organization at each site within this study.

Regarding household archaeology and research on domestic groups, I have argued that household archaeology provides a methodological framework for the discussion of domestic groups, while its latent predispositions are largely functionalist – discussing the similarities or differences between households to understand the local social organization. This, however, still leaves aside the question of social relations, which are crucial for a certain patterning of material culture. At root, as I have shown in the first section of this literature review, principles of kinship tend to ‘govern’ non-state societies, including social, political, and economic contexts. The majority of household archaeologists, however, avoid the topic of kinship, since ‘the field was created to move away from deterministic kinship studies’.⁶⁴⁰ Despite the difficulties in tracing kinship archaeologically, by relying upon ethnographic cases I recognize that ‘the elementary forms of kinship, politics and religion are all one’.⁶⁴¹ Therefore, a clear-cut separation between the three should also be avoided when dealing with the available prehistoric data.

This study does not make a clear distinction between kinship and the archaeological record, thereby failing to fulfil the initial aim of household archaeology. The step away from considering the house as the only kinship structure detectable archaeologically will be further explained in Chapter IV. If the reader wonders why the ‘house societies’ model has not been listed among the five models of non-state societies, the answer is simple: house societies are not an ideal type of social organization. Why this is so, is explained in more detail in Chapter IV, through multiple ethnographic examples and the archaeological example of Çukuriçi Höyük. Now, let us dive into relations between house dwellers at the two archaeological sites. The next chapter discusses the EBA ecology at Çukuriçi Höyük, EBA subsistence practices, and their dwelling perspectives. As I will argue, dwellers at this site were embedded into regional mixed economies through their on-site and off-site subsistence activities, within and beyond households.

⁶⁴⁰ R. Wilk, pers. comm. 2017.

⁶⁴¹ Sahlins 2008, 197.

III. Beyond Flora and Fauna: Reconstructing the Prehistoric Landscape and Mixed Economies at Çukuriçi Höyük

‘Cultural landscapes are inherently political, allowing the ‘reading’ of landscapes’ and regions’ histories. For example, soils retain evidence of their use, people remember management decisions, tax records show changed ownership, and integrated evidence from many sources records climate change. Thus the study of biogeophysical processes alongside the history of political and social change can expose the range of forces active in those processes’ formation and allow a more complete understanding of decisions and outcomes.’

Carole L. Crumley⁶⁴²

Introduction

In this chapter, I show that the EBA site of Çukuriçi Höyük and its surroundings represented a spatially enclosed, self-sustainable ecological system, which was not necessarily cut off from regional exchange networks. These regional exchange networks expanded local households’ embeddedness within socio-economic regions,⁶⁴³ through which dwellers at this site acquired obsidian, wool, and other imported goods, necessary for local reproduction. This implies a rich ecological niche in which the people of Çukuriçi Höyük dwelled by transforming it. Dwellers at this site certainly did not treat neighbouring groups solely as their enemies, but also engaged with them in the exchange of desirable goods. These goods could have stemmed from what Sahlins called an ‘inter-tribal sector’.⁶⁴⁴ Although these ‘inter-tribal’ exchanges may have been episodic, they were crucial for local reproduction, regional alliances and enmities, and political arrangements that could guarantee peace in the wider region. In the absence of reliance on plough agriculture, dwellers at Çukuriçi Höyük relied on the mixed regional economy. It comprised rain-fed cultivation and animal husbandry, the gathering of wild plants, hunting large and small animals, (non-)specialized crafts expertise, gift and barter exchange. The EBA 1 village of Çukuriçi Höyük relied primarily on pooling local resources and only secondarily on regional exchange. Exchange, however, was not pursued solely out of necessity and for reproduction, but also to build regional alliances and enmities. Like their village, its households were also seemingly embedded in wider regional economies that may have supported the emerging ‘trading centres’, as further elaborated in Chapter IV. This chapter starts with a short vignette from my fieldwork, to depict a setting in which Çukuriçi Höyük is located today. Without any intention to reconstruct prehistoric surroundings from a presentist understanding, the Çukuriçi vignette establishes a translation between ethnography and archaeology in terms of academic writing.

On a Sunday in October, during my fieldwork at the excavation house of the Austrian Archaeological Institute in Selçuk, Turkey, I decided to walk down the tree-lined alley leading from Selçuk to Pamucak beach, just six kilometres west of the town. The path ran somewhat

⁶⁴² Crumley 2020, 1.

⁶⁴³ For a fuzzy and flexible conception of ‘region’ and its persistent value within historical anthropology, see Gingrich 2020.

⁶⁴⁴ Sahlins 1986, 16, fig. 2.1.



Fig. 9 The agricultural fields west of Selçuk, as seen from the Byzantine fortress Ayasoluk (S. Cveček)

parallel to the Küçük Menderes River, which empties into the Aegean Sea a few hundred metres to the north. Strolling west, I left behind the town and the hilly slopes on the outskirts of Selçuk, largely uncultivated and forested by oak. I passed by Selçuk-Efes's airport on the left and extensive agricultural fields on the right. The cotton fields and fig, peach, and citrus orchards did not follow any particular pattern. On the edges of those fields stood a set of small, fenced field houses (see Fig. 9).

These 'farmhouses' (*Çiftlik Evi*) had extended roofed porches, and the locals later told me that they belong to the fields' owners. They are not permanently occupied but used for storing agricultural tools, for preparing food while working in the fields, or for barbequing at the weekends. Along the way, I stopped by a carpet-weaving and jewellery shop, geared towards visitors to Ephesus, on the opposite side of the road. I passed by a flock of goats grazing and browsing on the roadside, and continued walking towards the shoreline. About three kilometres from Selçuk, the sky opened up, the tree-lined alley ended, and the fertile fields dramatically turned into sandy soils, with perennial steppe-like shrubs (see Fig. 10). This flora persisted all the way to the sandy Pamucak beach to the west, and to the Küçük Menderes River to the north. I was surprised by this abrupt change in the landscape.

On my return to the excavation house, I asked about the shrubby land close to the beach. Some locals from Selçuk told me that the sandy soil is not fertile enough for cultivation, while others argued that the sea's salinity is the main reason for the lack of agriculture. Such answers seemed unconvincing because the cultivated fields, with occasional farmhouses, extend all the way to the coast on the other side of the Küçük Menderes River.

Back in Halle, Germany, where I was revising this chapter, I revisited the photos I had taken along this walk. I came across one with a yellow triangular sign. The sign's black capital letters read '*Karayollari istimlak sınırı*', meaning 'the border of expropriated land'. Thinking



Fig. 10 The sandy soil and shrubs on the southern side of the Küçük Menderes River delta (S. Cveček)

of the strict line between the cultivated and shrubby fields, things fell into place. This shrubby piece of land did not represent infertile or saline sandy soils, but reflected its ownership in the hands of the government, who left it uncultivated.

This observation demonstrates the impact of land ownership on soil of the same basic type, and shows that field cultivation along the Küçük Menderes Delta is possible all the way to the shoreline. This vignette can also serve as a visualization of the sharp division between the cultivated and the uncultivated land surrounding Çukuriçi Höyük in the EBA. It highlights the ancient practice of maintaining small farmhouses for part-time use, close to the fields. The goats I passed conjured the important role played by their EBA ancestors, when the oak forest, as it still does today, covered much of the surroundings. Thus, even though the landscape has changed dramatically since prehistoric times, it nevertheless remains a valuable window into the past to some extent.

This chapter aims to contextualize the landscape around Çukuriçi Höyük through an interdisciplinary perspective. It will present a short overview of the stratigraphy at the site, and discuss a viable farming model for the EBA by outlining a theoretical framework of historical ecology and practice theory, followed by an interpretation of the empirical data indicating changes in the landscape. These are based on palaeogeographic analyses, which are available for the area surrounding the settlement. The particularities of this tell-settlement will be presented through calibrated radiocarbon dates (^{14}C) that allow for a precise understanding of cycles of occupation at Çukuriçi Höyük. The ‘zoography’ and ‘botanography’ of the site will serve as a proxy for the prehistoric landscape, and also for the discussion of farming practices employed during the EBA. In the final section, the anthropological models of horticulture and agriculture are discussed with respect to the earliest evidence for ploughing in Aegean prehistory. In conclusion, the mixed regional economies model is proposed for the EBA at Çukuriçi Höyük. This chapter draws on a qualitatively oriented cross-cultural study of a particular prehistoric environment through ethnographic analogy,⁶⁴⁵ historical

⁶⁴⁵ When writing about prehistoric societies from an anthropological perspective, the issue of using an ethnographic analogy for the interpretation of archaeological context cannot be avoided. This debate has been present in archaeology since its foundation, and the enthusiasm of archaeologists for ethnographic analogy has varied. Some scholars have criticized the application of ethnographic analogy to archaeological contexts (Ascher 1961), while others were in favour of such approaches, ‘because we can never actually see the past, one could argue that analogy must be a part of archaeological interpretation’ (Bloch 1953: 48). My own approach to ethnographic analogy closely follows that of Thomas, who claimed that ‘the most important role of ethnographic analogy lies not in filling in the gaps in our knowledge of prehistoric societies, but in troubling and disrupting what we think we already know’ (Thomas 2004, 241).

ecology, and practice theory, without attempting to infer local social organization solely from human adaptation to the environment. Instead, it makes an attempt to contribute to the interpretation of the prehistoric landscape and farming strategies at Çukuriçi Höyük from anthropological perspectives.

III.1. Historical Ecology and Practice Theory at Çukuriçi Höyük

The first section of this chapter addresses historical ecology and practice theory as a suitable approach for addressing the landscape surrounding Çukuriçi Höyük at the dawn of the Early Bronze Age. As it is widely accepted that modes of production influence the scale of production and the generation of overall surplus, these features inevitably also affect the scale of production of single households at a site. Therefore, the prehistoric evidence from Çukuriçi households can initially inform us about what type of mode of production might be evident for this site if we combine palaeogeographic, zooarchaeological, and botanical data. After outlining the chronology, this first section establishes that the Early Bronze Age dwellers at Çukuriçi Höyük were not only farmers relying exclusively on domestic products, but also fishermen, hunters, and collectors of wild fruits, nuts, and grasses. Although wild resources provide a smaller share than domesticated ones, both botanical and zooarchaeological data point towards the significance of wild resources for reproduction.

At the centre of this chapter stands the approach of historical ecology. This approach ‘focuses on the interpretation of culture and the environment, rather than on the adaption of human beings to the environment’.⁶⁴⁶ Historical ecology should not be confused with other traditions in socio-cultural anthropology, such as cultural ecology⁶⁴⁷ or cultural materialism.⁶⁴⁸ The latter two more or less deterministic approaches to understanding environmental and technological impact on social and ideological phenomena, and are rejected by most historical

⁶⁴⁶ Balée 2002, 14, italics in original.

⁶⁴⁷ E.g. Steward 1955. Julian Steward developed the cultural ecology approach in socio-cultural anthropology, which he described as a method and theory ‘for recognizing the ways in which culture change is induced by adaptations to the environment’ (Steward 1955, 5). He argued that cross-cultural regularities of ecological adaptation results in similar levels of socio-cultural integration. This approach denies the multiplicity and complexity of human interactions with an environment, and has been criticized by many scholars for not including the interaction of local societies with other socio-cultural units (Sahlins 1977). It fails to analyse the effects of state contacts on local social organization (Service 1971), and neglects the recognition that cultural features may adapt to environmental conditions in multiple ways (Milton 1997). In cultural ecology, the environment is also reduced to the ecological properties of the natural surroundings of a local society and, despite its recognition of a ‘cultural core’, perceives non-environmental factors as ‘secondary features’ (Steward 1955, 37). Although Steward made an attempt to distinguish cultural ecology from environmental determinism, he rejected the assumption that ‘culture comes from culture’ (Steward 1955, 36), which was later criticized by proponents of historical ecology (Balée and Erickson 2006), who instead focus on change, contingency, and human agency. Cultural ecology and its critique have been published elsewhere (see Helms 1978; Moran 1990; Milton 1997).

⁶⁴⁸ E.g. Harris 1969. Marvin Harris’ cultural materialism draws on universal features of every culture which, according to a cultural materialistic perspective, are composed of three levels: infrastructure (natural environment), structure (technology, social practices, population density), and superstructure (beliefs, values, norms). According to this theory, a social change appears when the infrastructure/natural environment changes, which affects both the structure and the superstructure of the society (Harris 1969). Reducing culture to an entirely materialist notion sparked much criticism of Harris’ theory from structural Marxists, who objected to the elimination of relative autonomy and the impact of social structure on society and called for a rejection of the ‘vulgar materialism’ (Friedman 1974). Unlike Julian Steward’s legacy of cultural ecology, which is still widely recognized as an early attempt to study society alongside environment in socio-cultural anthropology, Marvin Harris’ theory has been recognized as controversial and was never adopted into the mainstream approach within socio-cultural anthropology.

ecologists.⁶⁴⁹ Instead, historical ecology focuses on the investigation of how humans engage with and modify environmental features for their reproduction. It does not aim to identify universal causation between an environment and social organization. Nevertheless, finding similar patterns and correlations of social organization in comparable landscapes remains a critical aspect of historical ecology. Although historical ecology cannot be perceived as a new paradigm in the social sciences,⁶⁵⁰ it aims to foster interdisciplinary collaboration between a variety of social and natural sciences.

Using historical ecology to study a whole made up of people and a landscape which coexist through mutual influence enables this study to overcome long-standing debates on ecological and cultural determinism. Instead, an epistemic space emerges enabling us to engage with the phenomenon of society as a whole with its immediate landscape through a Bourdieuan perspective of practice theory.⁶⁵¹ This approach recognizes the agency of people who can make choices other than those predetermined by the environment.⁶⁵² In non-literate societies, such as (the EBA 1 site of) Çukuriçi Höyük, a lack of institutionalized transmission of knowledge is compensated for by the experience of ritual and non-ritual mimesis and embodied in practice, which Bourdieu considers the *modus operandi*.⁶⁵³ This affects all spheres of life: social reproduction, the construction of houses, and relations with the immediate landscape. The oral history and the participation of younger generations in the everyday activities of these groups actively shaped the succeeding generation's habitus, which is orchestrated collectively, without a conductor.⁶⁵⁴ Considering habitus as a changing practice, which may change on a personal but also a collective basis, this chapter is interested in the latter, as tracing persons within the household prehistoric records remains challenging, except for in a few cases for which there is exceptional evidence.

Placing human agency at the centre of archaeological research into prehistoric societies became more common in recent decades.⁶⁵⁵ Studies drawing on human agency in prehistory have led to a considerable advancement in the archaeological interpretation of archaeological contexts, explaining these through a perspective of persons as agents and decision-makers (e.g. the 'Ice Man' found in the Ötztal Alps,⁶⁵⁶ the lives of persons in under-floor burials at Çatalhöyük,⁶⁵⁷ and the role of architecture in agency and identity at Çadır Höyük⁶⁵⁸). However, these agency-oriented studies of prehistory have often dismissed the importance of the environment for human behaviour, and instead emphasized understanding peoples' actions as if they did not interact with, dwell in, or were not mutually dependent on their immediate human and non-human surroundings.⁶⁵⁹ These non-human surroundings are perceived as landscapes in historical ecology, following the concept that human management and appropriation of the environment transforms it into a landscape.⁶⁶⁰ Some define this as a *historical landscape*:

'A multidimensional physical entity that has both spatial and temporal characteristics and has been modified by human activity such that human intentions and actions can be inferred, if not read as material culture, from it.'⁶⁶¹

⁶⁴⁹ Balée – Erickson 2006.

⁶⁵⁰ Balée 2002.

⁶⁵¹ Bourdieu 1976.

⁶⁵² Dodaro – Reuther 2016.

⁶⁵³ Bourdieu 1976, 87.

⁶⁵⁴ Bourdieu 1976.

⁶⁵⁵ Flannery 1999; Dobres – Robb 2000; Hodder 2000; Joyce – Lopiparo 2005.

⁶⁵⁶ Hodder 1999.

⁶⁵⁷ Hodder 2000.

⁶⁵⁸ Sharon 2010.

⁶⁵⁹ Ingold 2000; Ingold 2005.

⁶⁶⁰ Crumley – Marquardt 1990; Crumley 1993.

⁶⁶¹ Balée – Erickson 2006, 1.

As the (pre)historic landscape at Çukuriçi Höyük cannot be understood on the basis of the contemporary landscape, this study draws conclusions from previously published archaeological material and adds anthropological contextualization, as

‘Different kinds of socio-political and economic systems (or political economies) in particular regional contexts tend to result in qualitatively unlike effects on the biosphere, on the abundance and speciosity of nonhuman life forms, and on the historical trajectory of subsequent human socio-political and economic systems (or political economies) in the same regions.’⁶⁶²

Each of the two case studies in my research project, Çukuriçi Höyük and Platia Magoula Zarkou, will be analysed with respect to their historical landscapes, in order to track changes in the landscape alongside changes in cultivation and herding practices, possibly reflecting a change in political economies.

The Prehistoric Landscape at Çukuriçi Höyük

Çukuriçi Höyük is located in what is now Izmir Province (Turkey) in western Anatolia, 2km south of the modern town of Selçuk and 6km from the eastern coast of the Aegean. This part of the east Aegean Sea, known as the Kuşadası Gulf, encompasses the area northwest of the island of Samos and 70km of the mainland coast. At present, citrus orchards surround the archaeological site, which demonstrates intensive and specialized agricultural activities. The contemporary climate in Selçuk is humid, with high annual precipitation (700mm/year), but with an unequal seasonal distribution of rain.⁶⁶³ Rainy winters and dry summers can cause occasional droughts that may last over several summer months.⁶⁶⁴ Based on the archaeological and palaeographical evidence, it can be seen that the landscape (and to a lesser extent, the climate) at the site has changed dramatically since the Bronze Age. Nevertheless, these changes have not led to an overall reduction of some kind of farming activity in the area.

Palaeographic studies have shown that at the end of the last glaciation period, the area under water was much larger compared to today’s coastline. Maritime embayment reached 20km inland, to the Swamps of Belevi.⁶⁶⁵ Following the marine regression of the Aegean Sea over the millennia, the coast gradually shifted to the west. Simultaneously, the movement of the Küçük Menderes River caused the formation of alluvial plains in the southern parts of the bay.⁶⁶⁶ The site of Çukuriçi Höyük was first settled in the Early Neolithic (6700 BC) on the alluvial plains of the Derbent Valley, 1.5–2km south of the Aegean coast. This 3km wide valley was confined by the Aegean Sea to the north and by hills up to 358m above the sea level to the east, south, and west. The prehistoric coastline and surroundings of Çukuriçi Höyük are visually represented in Figure 11.

In prehistory, Çukuriçi Höyük was not the only settlement within this micro-region. An unexcavated tell at Arvalya Höyük was identified 5km west of the site.⁶⁶⁷ Both of these sites shared the same proximity to the sea, between 1.5–2km, which makes it possible to label them as coastal sites. Although Arvalya Höyük has not been excavated and the importance of the sea for the inhabitants of this site therefore cannot be precisely established, the significance of maritime resources is evident from subsistence practices at Çukuriçi Höyük. Both of these sites were located within alluvial plain valleys, which are now known as Arvalya Valley

⁶⁶² Balée 1998, 14.

⁶⁶³ Türkeş 1996.

⁶⁶⁴ Türkeş 1996.

⁶⁶⁵ Brückner 2005; Brückner et al. 2008; Stock et al. 2015.

⁶⁶⁶ Stock et al. 2015.

⁶⁶⁷ Stock et al. 2015.

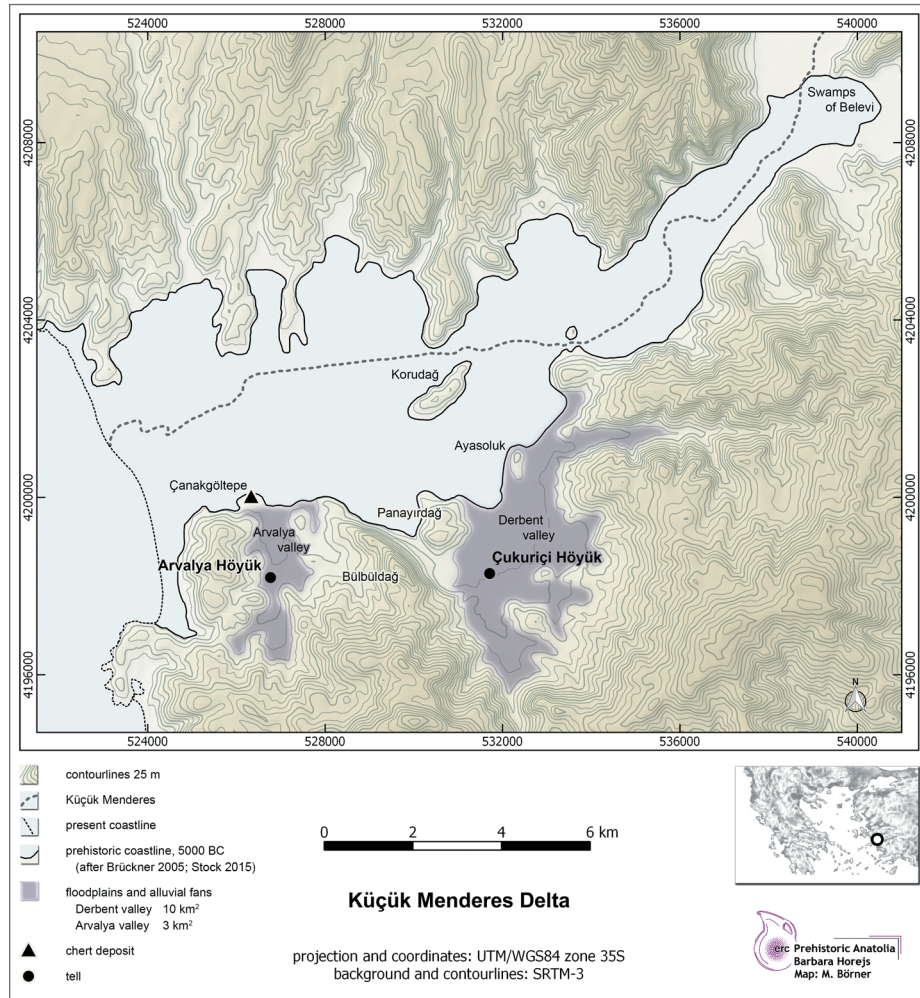


Fig. 11 The prehistoric landscape at Çukuriçi Höyük (Stock et al. 2015, fig. 1)

(1km wide and 3km long) at Arvalya Höyük and Derbent Valley (3km wide and 3km long) at Çukuriçi Höyük.⁶⁶⁸

While the sea offered a means of subsistence, three small rivers flowing in the vicinity of the two sites – Derbent Dare and the Derbent Çayı River close to the site of Çukuriçi Höyük, and the Arvalya Çayı River next to Arvalya Höyük – provided a fresh water supply and access to local clay. At Çukuriçi Höyük, pottery was handmade and of local origin in all phases.⁶⁶⁹ The two settlements had already been abandoned before the Küçük Menderes River reached the sites in around 1000 BC, and not due to flooding:⁶⁷⁰ but at the same time, this does not eliminate any other environmental reasons for the apparently simultaneous abandonment of the two coastal sites at the end of EBA 1, such as severe drought, declining agricultural yields, or the exhaustion of local copper resources.

The EBA settlement of Çukuriçi Höyük is situated on an anthropogenic mound, a typical form of settlement in the Neolithic, Chalcolithic, and EBA periods in southeastern Europe and the Middle East.⁶⁷¹ Tell-settlements are commonly ‘physically formed by the successive

⁶⁶⁸ Stock et al. 2015.

⁶⁶⁹ Peloschek 2017.

⁶⁷⁰ Stock et al. 2015.

⁶⁷¹ Rosen 1986; Bailey 1997; Bailey 1999; Rosenstock 2009.

building, destruction or perishing and rebuilding of mud, clay and wooden buildings that, in sum, represent the repeated use of a particular place over long periods of time'.⁶⁷² They may be formed over long cycles of occupation, abandonment, and reoccupation, which result in the non-static demography of tell communities. The spatial dimensions of these communities are certainly not limited to the tells themselves, but also include activities beyond the tell that should be studied together with the excavated area.⁶⁷³

Cycles of Occupation and Abandonment at Çukuriçi Höyük

Çukuriçi Höyük is an example of a tell-settlement with a dynamic history of long periods of occupation, abandonment, and reoccupation. This has been proven through the excavations carried out at the site between 2006 and 2014⁶⁷⁴ and radiocarbon dating of the archaeological layers. In total, 8.5m of anthropogenic material has accumulated at the site⁶⁷⁵ and the settlement can be inferred to cover an area measuring approximately 200m by 100m (16,000m², assuming an ellipsoid shape).⁶⁷⁶ The earliest occupation at Çukuriçi Höyük dates back to 6680 calBC, during the Early Neolithic period in western Anatolia. The first settlers at the site were early sedentary farmers with an integrated package of farming and herding knowledge as well as seafaring and fishing skills,⁶⁷⁷ who reached and colonized the western Anatolian coast through a maritime route from the eastern Mediterranean.⁶⁷⁸ The Early Neolithic period is divided into two phases: ÇuHö XIII (6680–6600 calBC), and ÇuHö XII (6600–6500 calBC). The period of the Early Neolithic is followed by the Late Neolithic period, which is divided into four phases: ÇuHö XI (6500–6400 BC), ÇuHö X (6400–6300 BC), ÇuHö IX (6300–6200 BC), and ÇuHö VIII (6200–5970 calBC).⁶⁷⁹ A visual representation of the stratigraphy at Çukuriçi Höyük is given in Figure 12.

The archaeological remains show that domestic activities and activities related to early farming were continuously performed at and around the site for approximately 700 years, between 6680 calBC and 5970 calBC.⁶⁸⁰ The end of the Neolithic occupation has been radiocarbon dated to approximately 5980 calBC,⁶⁸¹ after which the settlement was abandoned. This long-lasting interruption in occupation and residence at the site, known as a hiatus in archaeology, lasted for approximately 2600 years. During this time, no traces of reoccupation or any other anthropogenic activities being carried out at the tell were left behind in the archaeological record. The cause of the hiatus is still unknown.

Following the long period of absence of activity after the Late Neolithic abandonment of the site, the mound of Çukuriçi Höyük was reoccupied in 3350 calBC, in the Late Chalcolithic period.⁶⁸² Although the reasons for the site's reoccupation could be manifold, including

⁶⁷² Bailey 1999, 108.

⁶⁷³ Ashmore – Knapp 1999; Bailey 1999.

⁶⁷⁴ The excavation of the western Anatolian site of Çukuriçi Höyük was led by Barbara Horejs, the director of the Institute for Oriental and European Archaeology (OREA) at the Austrian Academy of Sciences, and her team. This research project was co-funded by the European Research Council (ERC Starting Grant project no. 263339), the FWF grant (project no. P 19859–G02), and the START grant (project no. Y528–G19). The main focuses of the project were two distinct settlement phases between the 7th and the 3rd millennium BC: the Neolithic along with early sedentary occupation, and the proto-urbanization phases of the Chalcolithic and EBA periods.

⁶⁷⁵ Horejs 2016a; Horejs 2017b.

⁶⁷⁶ Stock et al. 2013; Stock et al. 2015.

⁶⁷⁷ Horejs 2019a.

⁶⁷⁸ Horejs et al. 2015.

⁶⁷⁹ Horejs 2017b.

⁶⁸⁰ Horejs 2017b.

⁶⁸¹ Horejs 2017b.

⁶⁸² Horejs 2017b.

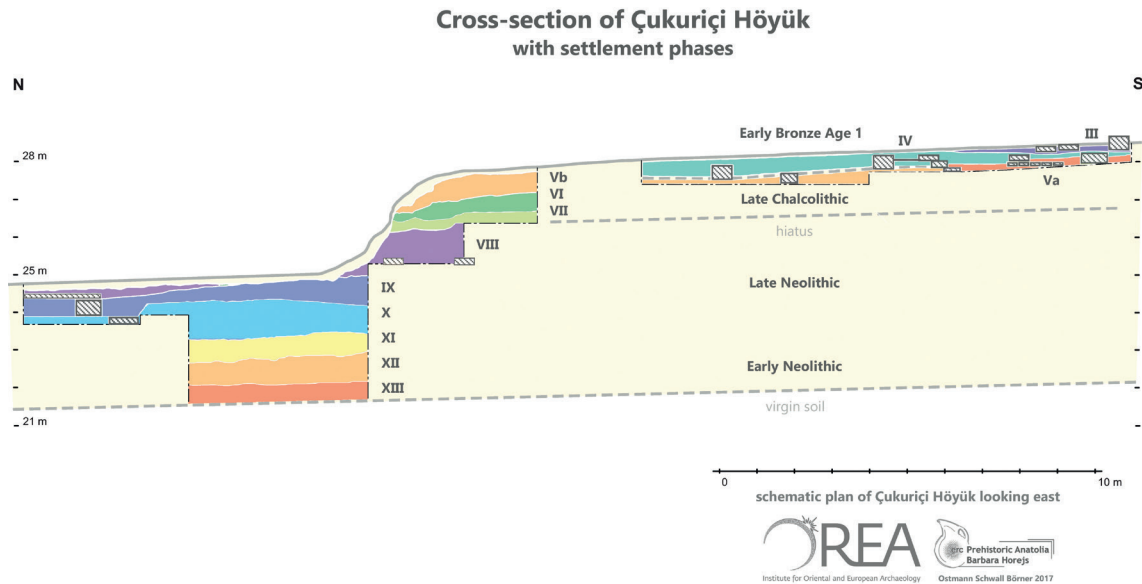


Fig. 12 Stratigraphy at Çukuriçi Höyük (Horejs 2017a, fig. 1.6)

proximity to the sea and the rich maritime and terrestrial environment, it remains possible that people reoccupied the site for other practical reasons. For example, among the Ubena, a horticultural group in Tanzania, people preferred to resettle old, abandoned sites because creating new fields from previously deforested areas is easier than clearing a primary forest.⁶⁸³ The origin of the people who resettled Çukuriçi Höyük is so far unknown, but it is apparent that they were knowledgeable in metal smelting techniques, unlike the Neolithic settlers of Çukuriçi Höyük.⁶⁸⁴ The Late Chalcolithic period at Çukuriçi Höyük is divided into three phases: ÇuHö VII (3350–3270 calBC), ÇuHö VI (3270–3110 calBC), and ÇuHö Vb (3110–3050 calBC).

Technologically, a new pottery style⁶⁸⁵ and the intensification of arsenical copper and even silver-copper production further distinguish the EBA from the Chalcolithic period at Çukuriçi Höyük.⁶⁸⁶ The Early Bronze period is divided into three phases: ÇuHö Va (3050–2950 calBC), ÇuHö IV (2950/2900–2850 calBC), and ÇuHö III (2850–2800/2750 calBC).⁶⁸⁷ Although the abandonment of the site at the end of the ÇuHö III was originally interpreted as due to an earthquake,⁶⁸⁸ the follow-up excavations have not supported this interpretation and the reasons for the abandonment of Çukuriçi Höyük have therefore remained unknown.⁶⁸⁹

The Site's Immediate Surroundings

Botanical and zoological data can be used in archaeology to infer the historical environment of an excavation site. This contributes immensely to the understanding of the landscape in which people cohabited during a certain period, and avoids projecting present-day surroundings

⁶⁸³ Culwick et al. 1935.

⁶⁸⁴ Although some Neolithic societies developed cold metalworking (which was not attested at the site of Çukuriçi Höyük), the casting of copper alloys was generally introduced during the Chalcolithic period.

⁶⁸⁵ The tripod cooking pot was introduced during the EBA 1 occupation at the site (M. Röcklinger, pers. comm. 2018).

⁶⁸⁶ Mehofer 2014.

⁶⁸⁷ Horejs 2017b.

⁶⁸⁸ Horejs 2009.

⁶⁸⁹ Röcklinger 2015.

or environmental conditions onto the past.⁶⁹⁰ However, the localized zooarchaeological and archaeobotanical data may not generate a direct reflection of the surroundings:⁶⁹¹ people's dietary choices are not only controlled by locally available food, but are also influenced by social organization⁶⁹² and cultural preferences. Nevertheless, through this data, it is possible to understand the role of animals and plants in the human diet and to employ zooarchaeological and archaeobotanical data as a proxy for localized environmental change over time.⁶⁹³

Drilling cores sampled around the settlements of Çukuriçi Höyük and Arvalya Höyük provide some data on natural vegetation in prehistory. The data, analysed through pollen analyses, showed that deciduous oak (*Quercus robur/cerris*)⁶⁹⁴ forest surrounded the site from the Early Neolithic to the EBA.⁶⁹⁵ Deforestation of the area surrounding the two sites does not seem to date back to the Neolithic or Bronze Age period, due to the high percentage of deciduous oak pollen remains in the drilling cores contemporary with all periods of occupation.⁶⁹⁶ After oak, *Cerealia* pollen is the most abundant group of plant remains identified from drilling cores in all phases, including plants that grow grain and can be produced for seed or for food.⁶⁹⁷ This confirms the presence of either wild or domestic crop fields or gardens in close proximity to Çukuriçi Höyük in all periods of the mound's occupation.

Botanical macro-remains from drilling cores dating from approximately the 5th millennium BC onwards provide more information about the landscape surrounding the site during the EBA. Water plants such as *Typha* sp., *Najas* sp., and *Characeae* show that some areas around the site were swampy. Thus plant cultivation is unlikely in the immediate vicinity of these swamps⁶⁹⁸ – or it should be assumed that not all of the Derbent Valley was suitable for domestic plant cultivation during the EBA. Bulrushes (*Typha* sp.) are known as the first wetland plants to grow on newly exposed wet mud,⁶⁹⁹ which fits with the results of palaeogeographic studies conducted in the Derbent Valley. The movement of the Küçük Menderes River towards the west caused new land to be exposed near the site, in which bulrushes (*Typha* sp.) were able to flourish. Marshes near to the site must have provided a suitable habitat for aquatic plants and a variety of animals, such as water birds, insects, crabs, and worms. Whether the wild animals and plants were integrated into the subsistence practice at Çukuriçi Höyük will be discussed below.

Crop Cultivators, but also Gatherers of Wild Plants, Fruits, and Nuts

Archaeobotanical analyses at Çukuriçi Höyük were conducted for each occupational phase.⁷⁰⁰ The absence of crop processing residues such as cereal stalks, rachis fragments, glumes, as well as the low percentage of wild-growing plants usually associated with the cultivation of field crops is common to all of the samples in each occupational phase. The reasons for

⁶⁹⁰ Stahl 2008.

⁶⁹¹ Clark – Speth 2013.

⁶⁹² For state societies, Bourdieu showed that class also determines people's tastes and food choices (Bourdieu 2010 [1984]).

⁶⁹³ Clark – Speth 2013; Pilaar Birch 2013.

⁶⁹⁴ Pollen analyses at Çukuriçi Höyük included botanical analyses of micro-remains (e.g. charcoals) from archaeological layers and pollen analyses from non-archaeological layers in the wider hinterland (e.g. from dried-out natural archives, such as lakes, where the ecological data are protected). Both bodies of pollen analyses confirmed the evidence of deciduous oaks in close vicinity to the site (B. Horejs, pers. comm. 2020).

⁶⁹⁵ Knipping et al. 2008; Stock et al. 2015.

⁶⁹⁶ Stock et al. 2015.

⁶⁹⁷ Stock et al. 2015.

⁶⁹⁸ Stock et al. 2015.

⁶⁹⁹ Valk – Davis 1976.

⁷⁰⁰ The analysed botanical data comprises a total of 1264 samples from 676 contexts with a total volume of c. 11.5m³. The overall characteristic of these samples is a very low density of archaeobotanical remains, while some samples did not contain any botanical remains at all due to the preservation conditions.

the absence of crop process residues may be manifold. Firstly, the absence may be of a methodological nature, since no garbage dumps have been excavated at the site, and therefore threshing remains⁷⁰¹ may be present in other unexcavated parts of the tell. Secondly, these by-products of cereal processing were generally not used for kindling fire. Thirdly, crops were not processed at the excavated area itself, but in other parts of the tell or even outside the settlement, such as in the fields, where plant remains could be used as animal fodder or fertilizer. However, the evidence of clean charred seeds, without the culms, indicates that these were prepared for human consumption.⁷⁰² This data therefore provides solid evidence for the subsistence practices and diet of the inhabitants of Çukuriçi Höyük during the EBA.

Since the Early Neolithic period, the botanical remains at the tell comprised predominantly domestic plants such as cereals (including einkorn, emmer wheat, and barley) and pulses, or *Leguminosae* (lentils), whereas wild plants had minimal importance (figs among fruits and wild pistachio among nuts). By the Late Neolithic, wheat had become predominant among the cereals, and wild grapes appeared in the record for the first time. This assemblage remained stable until the Late Neolithic, in which flax was abundant but the site was abandoned.⁷⁰³

After a hiatus of approximately 2600 years following the Late Neolithic period, a new group of people resettled the site during the Late Chalcolithic Phases (3350–3050 calBC). During these phases, pulses (lentils, bitter vetch, fava beans, and *Vicia palaestina*) and cereals (barley) were the principal crops. The wild fruits comprised grapes and whole figs, and the first wild olives were attested in the record. Compared to the Neolithic record, pulses become the most important staple crop during the Late Chalcolithic period.⁷⁰⁴

During the EBA phase ÇuHö IV (2950/2900–2850 calBC) domestic plants dominate within the record at 62% of finds (pulses 54%, cereals 8%), while wild plants at 28% (fruits and nuts 16%, wild grasses 12%) are of secondary importance, and undetermined seeds make up 8%, and fragments 2% of finds. Among domestic plants, legumes outnumbered the cereals, a trend that continued from the Late Chalcolithic period into the EBA. Among wild nuts, almonds were attested for the first and only time at Çukuriçi Höyük.⁷⁰⁵

During the last occupational phase at the site, i.e. the EBA phase ÇuHö III (2850–2800/2750 calBC), the record diverges from the established rule of domestic plants dominating. Whereas the percentages of wild plants identified at the site throughout all occupational phases varied between 1% and 22%, during the EBA phase ÇuHö III wild plants represent 65% of finds (wild grasses 58%, wild fruits and nuts 7%), followed by 22% domestic plants (pulses 12%, cereals 10%), and undetermined seeds at 13%. Two digested and charred seed fragments were found within an oven layer, evidence of the use of dried animal dung for fuel during EBA 3 (but lacking in all other periods). The breakdown of archaeobotanical data by phase is represented in Figure 13.⁷⁰⁶

The botanical record from Çukuriçi Höyük shows several important traits for discussing this version of EBA subsistence. In all phases, the dwellers mainly relied on domestic crops, and successfully transmitted crop cultivation across generations. They also integrated wild plants, fruits, and nuts into their diet, which demonstrates that the settlers were aware of their landscape beyond the cultivated fields or gardens. Despite these commonalities, plant cultivation

⁷⁰¹ ‘Threshing remains’ in this context refers to all residues linked to the removal of grains from the rest of the plant. This includes panicles, straw and chaff. The most common manual, non-mechanized method for separating grain from the ears and straw includes using a stick or hinged flail to beat the crop on the floor. For a detailed step-by-step description of separating the wheat from the chaff, see Halstead 2014b, 127–190.

⁷⁰² Previously cleaned charred remains for consumption have also been identified at Platia Magoula Zarkou (Jones – Halstead 1993).

⁷⁰³ Horejs et al. 2011.

⁷⁰⁴ Horejs et al. 2011; Schwall 2018.

⁷⁰⁵ Horejs et al. 2011.

⁷⁰⁶ Horejs et al. 2011.

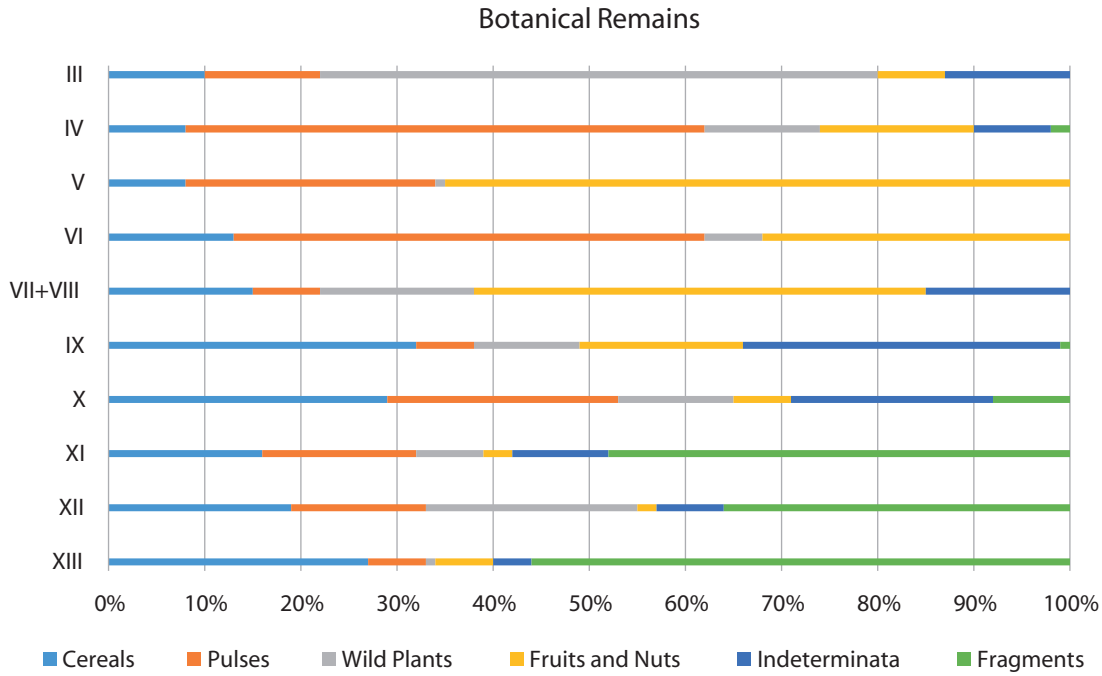


Fig. 13 Breakdown of botanical remains by phase (after Horejs et al. 2011)

strategies point toward a sharp difference between the Neolithic and Late Chalcolithic/EBA settlers. Whereas the Neolithic settlers mainly relied on cereals, the Late Chalcolithic/EBA dwellers at the site consumed more pulses. With regard to the organization of labour, this is surprising, as pulses are more human labour-intensive than cereals,⁷⁰⁷ meaning that the Late Chalcolithic and EBA settlers may have invested more labour hours into cultivation than their predecessors. This does not imply that all settlers were equally involved in plant cultivation and processing. Drawing on extensive ethnographic literature, it is more likely that women rather than men were in charge of the time-consuming cultivation of pulses at Çukuriçi Höyük. Next we ask, can the obvious differences between the Neolithic and the EBA settlers of Çukuriçi Höyük also be detected in animal herding strategies?

Animal Herders but also Fishers and Hunters

During the Early Neolithic, the dwellers at Çukuriçi Höyük mostly relied on caprines (sheep and goat) among domestic animals (80%) and much less on cattle (20%), although the importance of cattle increased to 40% in later phases.⁷⁰⁸ Domestic animals provided the most important means of subsistence during the Early Neolithic, which was supplemented by hunting (fallow deer, wild boar, aurochs), fishing (maritime species), and collecting (mussels and snails).⁷⁰⁹

The Late Neolithic record of animal bones comprises 70% domestic animals and 30% wild animals (bivalves 22%, game 5%, and gastropods 3%).⁷¹⁰ During the Early Neolithic, local residents relied heavily on domestic animals, but the importance of cattle increased during the Late Neolithic.⁷¹¹ With regard to caprines, goats mostly outnumbered sheep. Late Neolithic dwellers also hunted big game such as red deer, fallow deer, and aurochs, and smaller wild

⁷⁰⁷ Halstead 1987.

⁷⁰⁸ Horejs et al. 2015.

⁷⁰⁹ Horejs et al. 2015.

⁷¹⁰ Galik 2014.

⁷¹¹ Galik 2014; Horejs et al. 2015

animals, such as wild boar. They collected maritime resources including oysters, spondylus shells, and blue mussels, and also engaged in fishing.⁷¹² The scale of animal husbandry does not support pastoralism but rather small-scale animal husbandry close to the settlement.⁷¹³

The new group who resettled Çukuriçi Höyük in the Late Chalcolithic period (3350 calBC) brought with them copper-smelting knowledge and a different subsistence strategy. The breakdown of zooarchaeological data for the Late Chalcolithic comprises 50% domestic and 27% wild animals (bivalves 13%, game 11%, echinodermata 3%, gastropods 1%) and some undefined mammals 23 %.⁷¹⁴ Among domestic animals, calorific intake from cattle as opposed to caprines gained in importance during the Late Chalcolithic. The inhabitants fished but also collected a variety of shells – wedge shells, lagoon cockles, Venus shells, carpet shells, and noble pen shells. These activities indicate a symbiotic relationship between the people and the landscape, relying on domestic animals, terrestrial game, and maritime resources.

The EBA record for the phase ÇuHö IV comprised 45.1% molluscs and fish, 45.3% mammals, 9.0% undetermined species, and 0.6% other.⁷¹⁵ Of the mammals, 83.2% comprised domestic animals and 16.8% wild animals. Among domestic animals, sheep and goats are the most represented, followed by the reduced importance of cattle and minimal subsistence contribution of pigs and dogs⁷¹⁶, the latter not showing any signs indicating consumption. Goats are more numerous than sheep in this period. Among wild animals, the most hunted animal was fallow deer, with wild boar, aurochs, brown bears, leopards, hares, foxes and stoats being of minimal importance, and a negligible number of birds and fish.⁷¹⁷ The evidence of inshore fishing is provided by gilthead bream and parrot fish, while large shark, ray, and stingray remains demonstrate offshore fishing.⁷¹⁸ This data indicates that the EBA dwellers of Çukuriçi Höyük herded goats and sheep, but also exploited wild game and maritime resources.

The trend of favouring small ruminants over cattle and pigs persisted during the EBA phase ÇuHö III. The breakdown of animal groups for the EBA phase ÇuHö III is as follows: 62.7% molluscs and fish, 32.6% mammals, 3.8% undefined species, and 0.9% other.⁷¹⁹ Among the mammals, at 91% domestic animals are much better represented than wild animals (9%). Among domestic animals, goats are more numerous than sheep. The last occupational phase at Çukuriçi Höyük shows a large increase in the diversity of species recovered from the site. Phase ÇuHö III and phase ÇuHö VIII also include a high variety of frogs, crabs, molluscs, and mammals recovered from these two phases in comparison to all other layers. On the one hand, this could be due to the larger amount of animal bones recovered from each phase: phase ÇuHö III and phase ÇuHö VIII were the most abundant. On the other hand, phase ÇuHö III and phase ÇuHö VIII were the last occupational phases before the abandonment of the site during the EBA and Late Neolithic, which may indicate that gathering maritime food may

⁷¹² Galik 2014.

⁷¹³ Galik 2014.

⁷¹⁴ Galik 2014. These data represent a percentage in bone weight in grams, interpretation of which should be undertaken carefully. Since animal bones of dissimilar species weigh different amounts, it is hard to compare these 1:1. Therefore, the presence of domestic animals and other mammals in this graph is over-represented (due to the heavier weight of these species' bones), while fish, snails, and other maritime foods are underrepresented (due to the light weight of fish bones and shells). Nevertheless, this diachronic representation of the weight of animal bones does indicate some general trends in diachronic shifts in subsistence as well as the contribution of animals to the overall diet. In this case the weight of animal bones (including mussels) can be used as a rough, vague measure.

⁷¹⁵ St. Emra, pers. comm. 2021.

⁷¹⁶ Dog bones do not display any cutting marks, and it is therefore unlikely that dogs were eaten.

⁷¹⁷ Galik et al. 2013; Horejs – Galik 2016; St. Emra, pers. comm. 2019.

⁷¹⁸ Galik 2014.

⁷¹⁹ St. Emra, pers. comm. 2021.

have served as a risk-buffering practice at Çukuriçi Höyük, suggesting that the site may have been abandoned due to climatic reasons.⁷²⁰

Within the EBA zooarchaeological record, the absence of birds is remarkable. Although some remains of water birds (such as ducks, geese, and pelicans) and sky birds (such as quail) were identified, the proportion of these in comparison to other wild animals is minimal. The lack of birds in the archaeological record cannot be explained by an absence of birds in the landscape. Proximity to the sea and rivers on one side and the forest on the other provide suitable habitats for both water and land birds. Therefore, it can be concluded that the residents of EBA Çukuriçi Höyük had established a long tradition of aversion to bird consumption, possibly because bird hunting is a time-consuming activity with a small return rate. However, another, non-economic explanation is possible. Various sizes of bird-shaped vessels (e.g. a duck standing on three legs) accompanied the dead bodies recovered from Yortan cemetery in the hinterland of western Anatolia, dating to EBA 1/2.⁷²¹ These types of vessels have so far not been found at any other settlements in western Anatolia. Water bird symbolism associated with grave goods pottery at Yortan, alongside the lack of the same pottery shapes within the settlements, and an aversion to bird hunting at Çukuriçi Höyük and other EBA 1 sites, may point towards a shared association of water birds with the dead during EBA 1 in western Anatolia. A small, brightly-burnished bird-shaped ‘askos’ has also been recovered from the settlement at EBA 1 Bakla Tepe,⁷²² which may further point towards the association of birds not only with the dead but possibly also with a ritual context within settlements.

We can also use animal remains as a proxy for further contextualization of the immediate environment surrounding the site. As the fallow deer represented the most important wild species (among the wild boar, hare, fox, wild cat, and bear) in the EBA, it was argued that this signifies a change in vegetation from the predominantly arborous taxa of the oak forest to open grassland. The former is more suitable for wild boar and the latter for fallow deer.⁷²³ This argument contradicts that proposed by palaeogeographers, who maintain that deforestation did not date back to the Neolithic or EBA, due to the high amount of deciduous oak pollen found contemporary with all occupational phases at the site.⁷²⁴ Therefore, we can conclude that whereas oak forest covered most of the landscape surrounding the site, its close vicinity was deforested, later replaced by fields, gardens and grassland (see Fig. 14).

A number of fireplaces and furnaces excavated at the site also support the idea that wood (and not animal dung) was the most common fuel for fire during the Late Chalcolithic and the EBA, over a period of approximately 600 years. Animal fuel was attested from only one oven in the EBA, phase ÇuHö III. Taking into account that the production of arsenical copper intensified during the EBA,⁷²⁵ the need to collect wood for burning fires and smelting metals also increased. Therefore it is quite likely that the land in the direct vicinity of the site was deforested during the EBA, but this has not been confirmed on any larger scale.⁷²⁶

With regard to the domestic economy at Çukuriçi Höyük, the herding and consumption of large domestic animals, namely cattle, are negatively correlated with metallurgy at the site.

⁷²⁰ The increase of maritime resources in the last occupational EBA phase ÇuHö III does not only point towards risk-buffering strategies and reasons for abandonment necessarily linked with changes in climatic conditions. Instead, this evidence most likely points towards possible difficulties in herding or planting strategies, social organization, the division of labour, population pressure, etc., mirrored in the increase in maritime resources as a risk-buffering strategy.

⁷²¹ Kâmil 1982.

⁷²² Şahoğlu – Sotirakopoulou 2011, 259, 370.

⁷²³ Galik 2014.

⁷²⁴ Stock et al. 2015.

⁷²⁵ Mehofer 2014.

⁷²⁶ Stock et al. 2015.

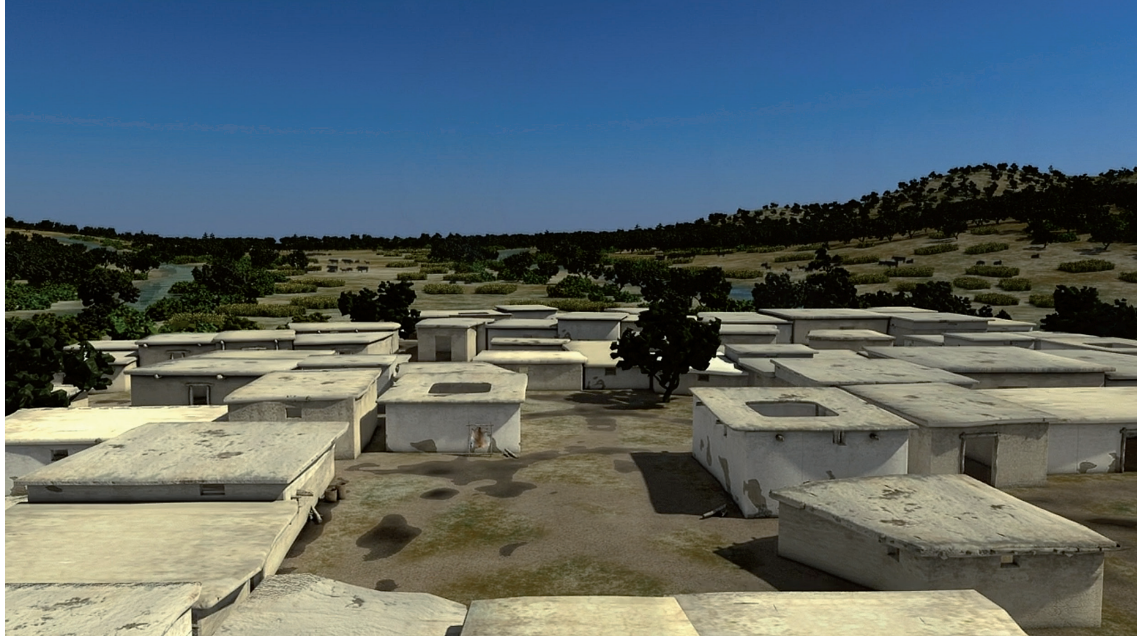


Fig. 14 3D representation of Çukuriçi Höyük and its immediate surroundings during the EBA (7Reasons)

Whereas metallurgy ‘intensified’ during the EBA,⁷²⁷ herding of cattle and pigs decreased significantly during this period. This is of particular interest with respect to the gendered division of labour, since within farming societies, cattle are usually the property and responsibility of male members of the community. The same applies for metalworking, which, ethnographically, is largely a male craft. This indicates that men organized their labour so as not to interfere with their craft production, and therefore compromised on cattle breeding. Instead, the herding of small ruminants such as sheep and goats became economically more significant in the EBA. This shift was previously explained through solely ecological conditions, since the Mediterranean coast provided a suitable environment for goat herding.⁷²⁸ Around Çukuriçi Höyük, goats could graze and browse on nearby hills all year round and on the harvested fields, close to the settlement, in the autumn (see Fig. 14).

To sum up, botanical and zoological data from Çukuriçi Höyük indicate that although the diet of the dwellers mainly depended on domesticated plants (such as cereals and pulses) and domestic animals (including sheep, goats, cattle, and pigs) the dwellers also integrated wild resources into subsistence. Domestic animals were herded on a small scale close to the settlement, and the possibility of pastoralism was excluded as, during the EBA, animals were slaughtered year-round. However, the question of how domestic plants were cultivated at the site remains open. This will be examined more closely below through a discussion of anthropological and archaeological models of cultivation for sedentary farming communities, such as Çukuriçi Höyük.

III.2. Horticulture vs. Agriculture

Following the initial introduction of the chronology and basic modes of production features at Early Bronze Age Çukuriçi Höyük, the following section will distinguish between two different modes of farming domestic crops from an anthropological understanding: horticulture

⁷²⁷ Mehofer 2014.

⁷²⁸ Galik 2014.

and agriculture. Readers may ask why we need this distinction for our analysis of households. The answer is that other anthropologists and more recently economists have already shown that horticulture or agriculture tend to correlate cross-culturally with different types of descent systems.⁷²⁹ For example, most sedentary societies with matrilineal kinship base their farming practices on horticulture. By contrast, the introduction of agriculture associated with the plough or ard is more likely co-occurring with patrilineal descent.⁷³⁰ These two types of (main dimensions in) kinship systems then follow different types of descent, and the loosely interrelated rules for the inheritance of land. Marriage patterns may or may not be directly correlated with rules of descent and inheritance. They are not only relevant to the community as a whole but also to households, within which most of these features should be translated into daily practice.

In the following section, I will summarize some of the cross-cutting features in terms of labour investment and technology, the role of domestic animals in these two types of farming, and the type of descent they are predominantly associated with. Before we proceed, it is important to note that both horticulture and agriculture may often coexist within the same community. Moreover, the most common transition from shifting cultivation or horticulture to mechanized (i.e. animal-drawn) agriculture is not a rule. Societies can adopt and abandon one or the other according to their own needs associated with the ways of arranging the plots, types of crops grown, tools employed, human labour organization, division of landholding, and suitability for their domestic animals. Regarding socio-political centrality, it is not necessarily agriculture that supports it and therefore centralized socio-political constellations may be supported by horticulture and agriculture alike.

Nowadays, within socio-cultural anthropology and archaeology, societies are commonly classified based predominantly on subsistence, such as hunter-gatherer, pastoralist, and farming societies. However, these (as with tribes) are very broad categories. We can distinguish between hunter-gatherers with immediate or delayed return systems.⁷³¹ The immediate return category includes those who reject the storage or accumulation of any surplus, as their social organization is based on sharing and the immediate consumption of hunted and collected food. Other hunter-gatherer bands who practise storage (e.g. of salmon or other types of food) belong to the delayed return system. Within these two broad classifications, farmers and pastoralists, who not only store supplies but also ascribe value to their herds and the land that they cultivate, broadly belong to the delayed return system of subsistence.

However, based on significant differences in cultivation and the gendered division of labour, farming societies, based on delayed return system of subsistence, can be further subdivided into those using *hoe cultivation* (*Hackbau*) or *plough cultivation* (*Pflugbau*).⁷³² Commonly referred to as *plough agriculture*, this mode can be further subclassified on a technological basis, based on the use of a plough or an ard for cultivation. Whereas a plough cuts into and turns the soil, an ard only tears up the soil without turning it, and appears to function better in semi-arid zones where the soil does not dry out. In what follows, I subsume both forms – ard and plough agriculture – under the term ‘plough’ and ‘agriculture’. The environmental and technological relevance of this distinction notwithstanding, its integration into one general category is in accordance with the predominant use within prehistoric archaeology and socio-cultural anthropology. The two types of farming, *hoe cultivation* and *plough cultivation*, have been extensively compared with each other.⁷³³ Goody showed that the main advantage of the ‘Eurasian’ Bronze Age early states can be ascribed to the shift to plough agriculture,

⁷²⁹ Aberle 1961; Goody 1976; BenYishay et al. 2017.

⁷³⁰ Aberle 1961; Goody 1976.

⁷³¹ Woodburn 1982.

⁷³² Hahn 1914.

⁷³³ Goody 1976; Goody 2010.

which technologically facilitated the production of increased surpluses, which led to the development of cities, record keeping and writing, as well as a change in marriage patterns and inheritance.⁷³⁴ In turn, the plough as a technological ‘improvement’⁷³⁵ did not reach many parts of sub-Saharan Africa until recently, and therefore these societies continued to use a digging stick for cultivation, and remained under the horticultural regime. The *Routledge Encyclopedia of Social and Cultural Anthropology* defines horticultural societies and horticulture as:

‘Gardening, as opposed to growing crops in fields (agriculture). The distinction is not a precise one, but generally horticultural societies are taken as those whose efforts at food production are on a small scale, and whose social organization is, in evolutionary terms, at a lower level of complexity.’⁷³⁶

A similar definition of horticulture and horticultural societies can be found in *the International Encyclopaedia of the Social and Behavioural Sciences*:

‘A horticultural society is one in which people’s livelihoods depend on the cultivation of small plots, commonly called gardens. These frequently support a wide range of crops and meet staple subsistence needs. The proportion of produce sold on the market varies, to finance the purchase of commodities manufactured elsewhere (e.g., clothing, processed food, hardware, etc.). The scale of society and its organization may vary widely too, from small tribal groups to large peasant populations.’⁷³⁷

Despite the lack of a clear-cut distinction between horticultural and agricultural societies, within socio-cultural anthropology it is widely agreed that the animal labour involved in cultivation and the adoption of the plough signifies agriculture:

‘*Agriculture* can be distinguished from horticultural systems by usage of plow, increasingly specialized labour, crop rotation (which maintains soil fertility), irrigation techniques, permanent settlement and farming with demarcated fields, which allows greater population densities resulting in greater political groups than a family or tribe.’⁷³⁸

With regard to intensity of labour, agriculture is a ‘more labour-intensive, literally ‘field’ (as opposed to garden) based system found in technologically sophisticated and socially complex societies.’⁷³⁹

Horticultural societies can be further divided into three groups – *shifting cultivation/swidden cultivation*, *bush fallow*, and the *ley system* – based on the varying degrees of sedentariness and technologies involved in the cultivation systems.

⁷³⁴ Goody 1976; Goody 2010.

⁷³⁵ In the hills of southern Ethiopia, among the Hamar, arid agriculture (a tool that only cuts into the soil but does not turn it, unlike the plough) replaced slash-and-burn horticulture only in the 1980s. Despite this technological advance, ploughing caused more problems than it solved: 1) plough agriculture led to a shortage of land since the two oxen that an agro-pastoral family keeps need to be fed year-round and the best pastures were therefore kept enclosed for the oxen; 2) the first harvests after the adoption of the plough resulted in poor yields – the seeds had not sprouted as they were laid too deep into the soil; and 3) with slash-and-burn cultivation the Hamar had harvested two yields per annum, which sprouted from the same seeds, whereas with the adoption of the plough only one harvest from one seed is possible (J. Lydall, pers. comm. 2019). Therefore, the adoption of the plough appears to be relative to soil conditions, hilly terrain, and the existing knowledge of planting within a specific community.

⁷³⁶ Barnard – Spencer 2002, 770.

⁷³⁷ Sillitoe 2015, 202.

⁷³⁸ Sillitoe 2015.

⁷³⁹ Barnard – Spencer 2002, 755.

Horticulture

i. Shifting Cultivation/Swidden Cultivation System/Slash-and-Burn System

This type of cultivation is typical for less sedentary farming societies who practise crop cultivation based on clearing the forest to establish new plots. Due to the decline in yields and soil fertility over time, these farming groups often move in yearly rhythms since they do not practice crop but land rotation. Their tools include axes, machetes, hoes, digging sticks, and so on. Shifting cultivation is human labour-intensive and the gendered division of labour is common. This system operates on the following temporal principle: one or two consecutive years of cultivated land use follow two or more decades of lying fallow in or near a forest. After this cycle, the land can be cleared and cultivated again.

ii. Bush-Fallow System

This system is very similar to *shifting cultivation systems* regarding the cropping strategy and technology, but the temporal principle differs in that there are longer cultivation and shorter fallow periods: after 5–10 years of cultivation, the land is left as fallow bush for 5–10 years. This is only possible through the integration of domestic animals such as sheep, goats, and cattle into cultivation, as they graze on the fallow land and provide manure for fertilization. Societies practising the *bush-fallow system* become increasingly sedentary, and some principles concerning landholding are common.

iii. Ley System of Cultivation

This system is defined by the systematic cultivation of pulses in rotation with tilled crops or grasses. This system of rotation works because pulses release nitrogen into the soil, whereas tilled crops (cereals) extract nitrogen from the soil. The ley system of cultivation conserves soil fertility and meets the needs of domestic animals. Temporary leys, usually between 2–5 years, are tilled or ploughed again and symbiotically integrate the cultivation of plants, the herding of domestic animals, and soil fertility. The farming plots are regulated and are held in common among sedentary groups.⁷⁴⁰

Agriculture

Societies practising agriculture usually apply monocrop cultivation (e.g. all wheat, all potato). The use of ploughs and draught animals (e.g. a pair of oxen, cows, or mules) for tilling the soil results in greater returns on a single man's labour, which allows other members of a household or society to simultaneously engage in non-ploughing related activities. Therefore, increased specialization and division of labour, and a shift from organic to mechanical solidarity, is commonplace among agricultural societies.⁷⁴¹ This leads to an important distinction of human labour input between horticultural and agricultural societies: while horticulture is human labour-intensive (as in soil is worked with hand tools such as the axe, hoe, or digging stick), agriculture is human labour-extensive, assisted by the ard, plough, and draught animals. The main characteristics of these cultivation models are summarized in Table 4.

It should be noted that the above categories of horticulture and agriculture are based on anthropological generalizations, but in practice, farmers may combine two or more of the

⁷⁴⁰ Sillitoe 2015.

⁷⁴¹ Sillitoe 2015.

	HORTICULTURE		HORTICULTURE/ AGRICULTURE	AGRICULTURE
Cultivated land	Gardens, small plots			Fields
	Shifting/swidden/ slash-and-burn cultivation system	Bush-fallow system (with domestic animals)	Ley system (with domestic animals)	Agricultural system
Proportion of sedentism, population density	Least sedentary societies, supports lowest population densities	Increasingly sedentary societies, larger population density	Increasingly sedentary societies, larger population density	Most of the community is sedentary year- round
Creation of plots	Clearing forests for creation of plots	Clearing bush fallow for creation of plots	No clearing necessary as domestic animals graze on fallow plots	Plowing
Crop rotation	Intercropping, no crop rotation, but rotation of land	Intercropping, no crop rotation, but rotation of land	Single crop on large fields, crop rotation	Single crop on large fields, crop rotation
Tools	Ax, machete, hoe, digging stick	Ax, machete, hoe, digging stick, animal power?	Ax, machete, hoe, digging stick, animal power? Plow?	Plow, animal power, other hand tools
Human labor	Labor intensive, women prepare the soil and cultivate plants, men usually clear forest (ax- related work)	Labor intensive, women prepare the soil and cultivate plants, men usually clear forest (ax-related work)	Labor extensive, no need to create new fields as the manure allows cultivation on the same fields	Labor extensive, specialized labor (other members perform non- agricultural activities), men prepare soil and women cultivate plants
Temporal principle	1–2 consecutive years of cultivated land followed by 20+ years of forest fallow	5–10 years of cultivated land followed by 5–10 years of bush fallow	Seasonal cropping and pasture of animals	Cultivation of the same fields each year
Domestic animals	Not necessary	Not necessary	Only possible with domestic animals	Only possible with domestic animals
Division in landholding	Household ownership of gardens, natural boundaries between plots	Landholding more clearly defined, agreed boundaries between plots	Unregulated leys (communal grazing rights) and regulated leys (fenced pastures)	Smallholders
Type of descent	Predominantly matrilineal	Predominantly matrilineal	Matrilineal/ patrilineal	Predominantly patrilineal
* These are ideal types. A cross-cutting combination of these models is feasible in practice.				

Tab. 4 Classification of horticulture and agriculture within socio-cultural anthropology
(after Barnard – Spencer 2004; Sillitoe 2015)

cultivation models described above.⁷⁴² Although the above definitions are listed through an evolutionary dimension, this does not imply that all societies develop along this line, from

⁷⁴² Despite their use of a plough, agriculturalists may also use a hoe, a digging stick, an axe and other hand tools for cultivation.

shifting cultivation to, say, mechanized agriculture.⁷⁴³ The relationship between degrees of sedentarization and the type of horti/agricultural system can equally be blurred. An exception to these general rules were the Koryak Nagas in Indian Nagaland, who practised a slash-and-burn cultivation system but lived in permanent villages with defensive structures, long-term land tenure, and some constancy in social structure, organized into what Renfrew would term an individualizing chiefdom.⁷⁴⁴ This is only one of the examples of the wide variety of possible combinations between farming systems, sedentariness, and social organization. It has also been reported that in India, societies practising shifting cultivation may coexist within neighbouring territories together with settled agricultural societies.⁷⁴⁵ This demonstrates the varying possibilities for the temporal and spatial coexistence of different types of farming societies, which should thus also be considered as a possibility for much of Anatolian prehistory.

III.3. Ploughs in the Archaeological Record of the Aegean Basin

Following the discussion of horticulture and agriculture in general anthropological literature, let us now look deeper into the archaeological record and see whether the evidence in the EBA 1 and 2 Aegean supports the overall existence and use of the plough. What is the evidence for or against it? What conclusions can we draw from this evidence? And finally, how reliably can we argue for the use of ploughs throughout the Aegean basin at the beginning of the 3rd millennium BC? Following a discourse on Neolithic farming practices in comparison to Late Chalcolithic and Early Bronze Age practices, this section shows that most of the indications available today in support of ploughing do not stem from any archaeological evidence, but are directly postulated based on Andrew Sherratt's model of the Secondary Products Revolution. The model claims that the Secondary Products Revolution, including the introduction of the plough among other things, swept the Near East, Anatolia, and the Aegean at the beginning of the 4th millennium BC. Apart from exceptional cases such as Neolithic Knossos,⁷⁴⁶ direct evidence for ploughing in the Aegean remains scarce. This section questions Sherratt's proposal of major kinship transformations proposed for the 4th millennium BC – from a matrilineal to a patrilineal kinship system – and proposes that, most likely, major transformations must have happened already during the Neolithic when more or less sedentary farmers adopted cattle, which commonly leads to patrilineal descent. At EBA 1 Çukuriçi Höyük, however, the evidence supporting ploughing is so far non-existent. Based on the evidence from Çukuriçi Höyük, neither Renfrew's model of *Mediterranean polyculture* nor Sherratt's model of the Secondary Products Revolution applies to this site. Therefore, we need an alternative interpretation of local modes of production immediately affecting households at Early Bronze Age Çukuriçi Höyük, which will be outlined in the last section of this chapter.

Although it is easy to distinguish between horticulture and agriculture ethnographically, it remains challenging to differentiate between them archaeologically, especially in the absence of written sources. For this reason, prehistoric archaeologists commonly address sedentary farming societies as (early) farmers or farming and herding societies. Nonetheless, attempts at distinguishing between horticulture and agriculture archaeologically have a long research trajectory.

Originally, the early farming societies in the Old World were categorized as '*primitive agriculturalists*' that practised a *slash-and-burn system* of horticulture. This resulted in the regular exhaustion of soil and reversion of cultivated plots to woodland, triggering the recurring aban-

⁷⁴³ Sillitoe 2015.

⁷⁴⁴ Fürer-Haimendorf 1985.

⁷⁴⁵ Fürer-Haimendorf 1985.

⁷⁴⁶ Isaakidou 2006; Isaakidou 2011.

donment of Neolithic sites and the spread of agriculture.⁷⁴⁷ The *slash-and-burn* model of cultivation for Neolithic farmers was replaced by *floodplain cultivation*,⁷⁴⁸ a system in which small plots in rich alluvial plains were used for cultivation and, after the soil was exhausted, turned into fallow forest. The *floodplain cultivation* model was further expanded upon by Sherratt,⁷⁴⁹ who argues that *swidden horticulture* was not a common practice by Neolithic early farmers (except for in the forested areas of what is now Finland, as well as in Central Europe and the Carpathians). Instead, early Neolithic farmers practised small-scale horticulture under riverine and lacustrine conditions, where almost no forest clearance, preparation of soil, or weeding were necessary, and self-cultivating soils allowed cultivation with minimal human labour.⁷⁵⁰ The local population growth in such small-scale, presumably matrilineal groups resulted in the ‘export of population’⁷⁵¹ to smaller alluvial environments, with little adaptation in terms of cultivation.

In the time between the 4th and 3rd millennia BC, namely the EBA in the Aegean and western Anatolia, Sherratt proposed that the Secondary Products Revolution replaced *floodplain cultivation*. This innovation involved the exploitation of domestic animals not only for meat but also for secondary products or services such as milk, wool, traction, and as pack animals.⁷⁵² The secondary product revolution was accompanied by settlement nucleation, plough agriculture, and the utilization of new ecological niches through pastoralism.⁷⁵³ The second model possibly applicable to the Aegean basin in the EBA, is *Mediterranean polyculture*, a distributive economy based on three staple crops: grapes, wine, and wheat.⁷⁵⁴ According to Renfrew, the emergence of chiefs in the EBA Aegean gave rise to a distributive economy in which the pooling of staple goods resulted in the intensification of agriculture, the division of labour between farmers and artisans, and the socio-political interdependence of villages.⁷⁵⁵

Whereas the archaeological data does not support the existence of *Mediterranean polyculture* until the 2nd millennium BC in the Aegean basin,⁷⁵⁶ the archaeological sources supporting use of the plough remain scarce. The ard cannot be preserved due to its organic/wooden origin and, to date, a stone blade which could be mounted onto a wooden ard frame has not been found. Moreover, it is highly unlikely that a plough would be excavated from a settlement or a burial, the two most common sources of prehistoric evidence. In turn, field houses, which I described in the introduction to this chapter, could also have existed in prehistory – but these are likewise missing from the record as these fields are buried under a thick layer of alluvium at Çukuriçi Höyük and other regional sites. Therefore, the evidence for traction was inferred through artefacts and epigraphic records indicating ploughing practices.⁷⁵⁷

Within the Aegean basin, it was proposed that the Minoan hieroglyphic sign 27, dating between 2100–1700 BC, is the earliest evidence for an ard, since its shape resembles this agricultural tool (see Fig. 15).

Another form of secondary evidence supporting animal traction derives from the terracotta figurine found in Tsoungiza (Corinthia, Greece), dating to the beginning of the Early Helladic II (approx. 2650 BC). Based on this figurine (see Fig. 16), in which a yoke shows that it was one

⁷⁴⁷ Clark 1952; Childe 1957.

⁷⁴⁸ Kruk 1973.

⁷⁴⁹ Sherratt 1980; Sherratt 1981.

⁷⁵⁰ Sherratt 1980.

⁷⁵¹ Sherratt 1980, 318.

⁷⁵² Sherratt 1981.

⁷⁵³ Sherratt 1981.

⁷⁵⁴ Renfrew 1972.

⁷⁵⁵ Renfrew 1972.

⁷⁵⁶ Halstead 1995.

⁷⁵⁷ Pullen 1992.



Fig. 15 The Minoan hieroglyphic sign 27, thought to be a plough (Hansen 1988, fig. 3)



Fig. 16 Ox figurine 1 from the Tsoungiza Hill excavation (Pullen 1992, fig. 3)

of a pair of oxen, Pullen argued that new agricultural technologies (e.g. draught animals, the plough/ard) were introduced into the Aegean at the beginning of the EBA.⁷⁵⁸

However, a more recent reassessment of the applicability of Sherratt's Secondary Products Revolution argued that domestic animal traction in the Aegean dates back to the Neolithic. Based on the animal bones from Neolithic Knossos, Isaakidou⁷⁵⁹ concluded that mortality patterns of cattle, sheep, and goats demonstrate that they were bred mainly for meat. However, traction-induced stress marks detected only on cattle provide evidence that they were used for ploughing. These recent zoological insights on ploughing and traction practice in Neolithic Crete⁷⁶⁰ were further supported by archaeobotanical research at 13 western Asian and Central European Neolithic sites (5900–2400 BC).⁷⁶¹ Manure fertilizer and milking, previously thought to be introduced in the 4th or 3rd millennium BC as part of the Secondary Products Revolution model, were already practised by early farmers in western Asia, as part of a package of *mixed farming*. For the period before the 2nd millennium in the Aegean, Halstead proposed a small-scale, horticultural regime without a plough but with the cultivation of cereals and pulses in rotation, without extensive forest clearing, and small-scale animal husbandry predominantly relying on sheep that could provide manure.⁷⁶²

A Misconception of the Floodplain Cultivation Model

Based on anthropological knowledge of horticultural societies, Sherratt's model of floodplain cultivation has been subject to scrutiny. Within socio-cultural anthropology, horticulture (either slash-and-burn/swidden, bush fallow or the ley system) is generally perceived as a more human labour-intensive form of farming. Among horticultural societies, it is mostly women who prepare the soil and carry out sowing, weeding, and harvesting. By contrast, among agriculturalists using the ard or plough, men own the stock and plough the fields. Consequently, female hoe cultivation labour is generally highly valued among horticultural societies. Therefore, it is more likely that horticultural groups, rather than hunter-gatherers or agriculturalists, are organized in matrilineal descent groups.⁷⁶³ Whereas Keesing's conclusions were based on a

⁷⁵⁸ Pullen 1992. By contrast, ard/plough marks were detected in northern Germany and the Netherlands. This supported the hypothesis that a plough pulled by yoked cattle diffused into Europe during the late 4th and early 3rd millennium BC (Tegtmeier 1993), although some other scholars have argued that these marks were of ritual significance and do not reflect regular use of the plough (Rowley Conwy 1987).

⁷⁵⁹ Isaakidou 2006.

⁷⁶⁰ Isaakidou 2006; Isaakidou 2011.

⁷⁶¹ Bogaard et al. 2013.

⁷⁶² Halstead 1995.

⁷⁶³ Keesing 1975; Goody 1976.

qualitative comparison of different horticultural societies, Goody's results were supported by statistical correlations in the Human Relations Area Files (HRAF) records, published in *Production and Reproduction*.⁷⁶⁴

Sherratt was familiar with these anthropological insights concerning the significant correlation between horticulture and matrilineality.⁷⁶⁵ He integrated these into the *floodplain cultivation* model proposed for the Neolithic and claimed that 'societies based on matrilineal lineages are thus likely to have been typical of early agricultural communities in the Old World'.⁷⁶⁶ However, the model of *floodplain cultivation* proposes little human labour (both male and female) being involved in cultivation. According to Sherratt, Neolithic riverine and lacustrine environments were non-forested and soils were 'self-cultivating', requiring minimal human labour for cultivation. Assuming this was indeed the case, it implies that the rigid division of labour, inherently linked to the value of female labour involved in cultivation, was non-existent in this context. Hence, it follows that ascribing matrilineal descent to the Neolithic floodplain cultivators is misleading.

The second point of criticism of Sherratt's *floodplain cultivation* and the attribution of matrilineal descent to the early Neolithic farmers concerns the livestock. In all contexts from the Levant, where the earliest farming was introduced in approximately 9500 BC, through Anatolia and Europe, 'Neolithic packages' integrated both plant cultivation and animal herding, including cattle. This is an extremely important characteristic specific only to the Old World. Recently it has been shown that the domestication of cattle usually leads to a shift away from matrilineal descent⁷⁶⁷ and the rule that can be applied to the archaeological data holds that 'the lower the amount of livestock raising, the higher the probability of bilateral kinship organization. And by contrast, the higher the local amount of livestock raising, the higher the probability of rigid patrilinearity'.⁷⁶⁸ Considering that livestock breeding played an important subsistence role among the so-called floodplain cultivators, it does not seem likely that these groups would have had a matrilineal system.

If matrilineality was not common during the Neolithic in the Middle East/western Asia, then it seems even less likely in the EBA since 'patrilineal or mixed descent with cattle appears to be a stable state, rarely lost once achieved'.⁷⁶⁹ Recent anthropological insights for Anatolian prehistory have also cast doubt on the occurrence of matrilineality in the Anatolian peninsula.⁷⁷⁰ This argument can be extended to the entire Middle East, including the Aegean basin⁷⁷¹ and across subsequent periods, to groups where both animal herding (including cattle) and the cultivation of domestic plants were of critical importance for subsistence. Among these societies, Çukuriçi Höyük is no exception. The zooarchaeological data attest the important role of livestock breeding during all phases of occupation, including cattle, which further supports a patrilineal rather than a matrilineal system of descent during the Neolithic and the EBA. On the one hand, this reasoning disproves a change in descent system from matrilineal Neolithic floodplain cultivators to a patrilineal Secondary Products Revolution following the 4th millennium BC. On the other hand, it points towards the major changes in kinship structures that must have appeared alongside or following the adoption of domesticates, especially cattle, among the early farmers in the Near East.

⁷⁶⁴ Goody 1976.

⁷⁶⁵ Sherratt 1981.

⁷⁶⁶ Sherratt 1981, 279.

⁷⁶⁷ Holden – Mace 2003.

⁷⁶⁸ Gingrich – Schweitzer 2014, 29.

⁷⁶⁹ Holden – Mace 2003, 2429.

⁷⁷⁰ Gingrich – Schweitzer 2014.

⁷⁷¹ It may be the case that matrilineal descent existed elsewhere during the Old World Neolithic and Bronze Ages. For example, 'matrilineal belts' or matrilineal communities were noted in sub-Saharan Africa (in the north of southern Africa), on the Malabar coast in India, and at Minangkabau in Indonesia during early colonial times.

III.4. (Regional) Mixed Economies

As a summary of evidence provided by historical ecology, this chapter concludes with the most suitable model for anthropological contextualization of modes of production at Early Bronze Age Çukuriçi Höyük. The record from this site does not correspond to the *Mediterranean poly-culture*⁷⁷² or the complete package of the Secondary Products Revolution.⁷⁷³ Instead, my analysis leads me to alternative options known among socio-cultural anthropological models of subsistence. The model summarized under mixed regional economies⁷⁷⁴ provides the context for similar local societies documented ethnographically, i.e. characterized by agriculture without ploughing but including domestic animals and plants as significant for subsistence and calorific intake, with corresponding symbolic representation. These small-scale societies relied on both domestic and wild animals and plants and integrated part-time craft activities into their domestic economies and households. On occasions their output served as important items of barter and gift exchange. Far from being self-sufficient, these farming villages correspond to archaeological records at Çukuriçi Höyük. They actively integrate both domestic and wild animals as well as plants and specific crafts into their household economies and engage in regional exchange. Based on the amount of obsidian and other non-local goods excavated from this site, Çukuriçi Höyük was indeed a good local case and example for mixed regional economies at the dawn of the Early Bronze Age. Not only the site per se, but also its respective households participated in these mixed regional economies, which will be examined through three different scales (local, regional, and supra- or interregional), as further contextualized in Chapter VII.

All of the above-mentioned models potentially overlook the importance of wild plants and animals for subsistence and, consequently, the domestic economy. Although most horticultural and agricultural societies generate their main subsistence from plant cultivation and animal husbandry,⁷⁷⁵ they also commonly integrate some degree of hunting and gathering (or foraging). This may not only be crucial for subsistence but may also be of symbolic value. An anthropological model of mixed economies⁷⁷⁶ has been proposed for the contextualization of Anatolian (pre)historic societies, including the Neolithic and subsequent periods in Anatolia,⁷⁷⁷ and will be further applied and analysed here for the case of Çukuriçi Höyük. Simple rain-fed cultivation alongside animal husbandry, non-specialized craft expertise, hunting small and large animals, gathering plants and other goods, and the exchange of gifts and goods for everyday purposes are the five elements that embed a local society into mixed regional economies which can shift between more or less centralized constellations (see Fig. 17).⁷⁷⁸

i. Rain-fed Cultivation and Animal Husbandry

According to the reconstruction of the prehistoric landscape surrounding Çukuriçi Höyük, which locates the site in an alluvial plain valley close to the Aegean Sea, a reliance on seasonal flooding for cultivation around Çukuriçi Höyük should be excluded. In the case of flooding, the rising water table contaminated with saline water would cause the salinization of croplands, having a disastrous impact on the harvest. In fact, salinization was and still is the biggest threat to soil fertility in and along the Mediterranean Basin.⁷⁷⁹ Therefore rain-fed

⁷⁷² Renfrew 1972.

⁷⁷³ Sherratt 1980; Sherratt 1981.

⁷⁷⁴ Gingrich – Schweitzer 2014; Gingrich 2017a.

⁷⁷⁵ This is also evident from the representative ethnographic cases chosen to discuss the ideal types of tribes in Chapter II.

⁷⁷⁶ Gingrich 2017a; Gingrich – Schweitzer 2014.

⁷⁷⁷ Gingrich – Schweitzer 2014.

⁷⁷⁸ Gingrich 2017a.

⁷⁷⁹ Zovko et al. 2013.

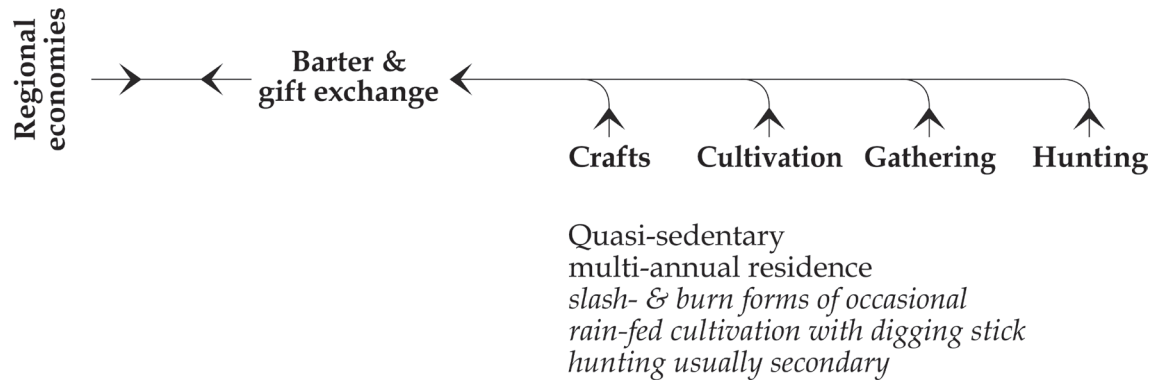


Fig. 17 Model of mixed regional economies (Gingrich 2017a, fig. 5)

mixed farming⁷⁸⁰ in gardens and fields or an intensive horticultural regime,⁷⁸¹ most likely without ploughing,⁷⁸² is a valid assumption for Çukuriçi Höyük. This can be further supported by the high proportion of pulses in the archaeological record during the Late Chalcolithic and the Early Bronze Age, as well as the absence of large-scale deforestation⁷⁸³. The botanical record from Çukuriçi Höyük refutes the possibility of *Mediterranean polyculture*⁷⁸⁴ during the EBA, since the three supposedly principal crops – wheat, grapes, and olives – were not widely attested at the site. Dwellers at Çukuriçi Höyük did in fact practise polyculture – ‘the simultaneous cultivation or exploitation of several crops or kinds of animals’ according to the *Oxford English Dictionary* – but at EBA Çukuriçi Höyük this type of polyculture was very different from the *Mediterranean polyculture* proposed by Renfrew for the EBA. Cultivation of multiple crops, including cereals and legumes, allowed them to cope with the droughts that must have been common in the Aegean basin during prehistory.⁷⁸⁵

The change in cultivation and diet between the Neolithic and the EBA community is clearly visible. Whereas the Neolithic dwellers consumed and cultivated more cereals, the EBA dwellers relied heavily on pulses, cultivation of which is more labour-intensive⁷⁸⁶ but which provide better yields than cereals in drought conditions.⁷⁸⁷ The bias towards pulses during the EBA could be a matter of the group’s preference for pulses over cereals; at the same time, however, it remains more plausible that through practice, the EBA dwellers developed a new cultivating strategy ‘to cope with unforeseen and ever-changing situations’.⁷⁸⁸ Pulses, in fact, cope better with droughts than cereals⁷⁸⁹ and are the best plant-based substitute for proteins, serving as an important ‘food in reserve’ whenever there is a scarcity of meat. Moreover,

⁷⁸⁰ Bogaard et al. 2013.

⁷⁸¹ Halstead 1995.

⁷⁸² Ploughing was not confirmed at Çukuriçi Höyük, either through direct evidence (a plough, an ard) or indirect evidence (bone pathologies on cattle bones, an increase in production of cereals in comparison to the labour- and time-consuming production of legumes). However, it remains possible that an arsenic-copper tool could be installed on a wooden base for ploughing.

⁷⁸³ Stock et al. 2015. Whereas the pollen analyses have not confirmed a large-scale, heavy deforestation surrounding Çukuriçi Höyük, deforestation in the direct vicinity of the site was most likely (see Fig. 14). Cleared forests surrounding the site would be turned into fields, gardens, and pastures, while wood was used as a building material and fuel for cooking, metallurgy, and pottery production – the latter two being particularly heat-intensive production processes.

⁷⁸⁴ Renfrew 1972.

⁷⁸⁵ Halstead 1995.

⁷⁸⁶ Halstead 1987.

⁷⁸⁷ Muthumanickam et al. 2011.

⁷⁸⁸ Bourdieu 1976, 72.

⁷⁸⁹ Zohary 2012.

the proportionately large presence of pulses within the EBA archaeological record further supports an intensive horticultural regime, with a significant contribution of female labour involved in the cultivation of domestic plants at Çukuriçi Höyük as pulses commonly decline in importance in plough-driven, extensive agriculture.

Animal husbandry at Çukuriçi Höyük provided the second most important source of subsistence. From the Neolithic to the EBA, the settlers herded cattle, pigs, sheep, and goats, and kept dogs. The predominant reliance on caprines and cattle during the Neolithic shifted to a focus on small ruminants such as sheep and goats in the Late Chalcolithic and Bronze Ages, also indicating a change in herding strategies between the two different groups of settlers. Apart from providing a means of subsistence, such as milk, fat, and meat, the cattle may have been used for draught and transport. Sheep, however, were slaughtered too early for a substantial production of wool at Çukuriçi Höyük,⁷⁹⁰ whereas goat skins could be worked for bellows, which were necessary for producing metal. The dwellers could make use of animal skins for the production of leather, indicated by the evidence of skinning on the bones of sheep and goat⁷⁹¹ as well as by bone piercing tools, which were widely attested in the record. Apart from these practical purposes, the cattle and pigs could be utilized in feasting and sharing beyond the household. Additionally, gift and barter exchange should be considered to have played a crucial role in establishing settlers' alliances beyond the Derbent Valley.

ii. Gathering of Wild Plants

Although domesticated crops were of major importance in everyday subsistence at Çukuriçi Höyük, during all phases of occupation the dwellers also relied on wild plants. They collected fruit including figs, grapes, and olives, and nuts including pistachios and almonds. Despite the minimal importance of wild plants, the practice of collecting wild plants in the summer (pistachios, figs), autumn (grapes, almonds), and winter (olives) further supports year-round occupation at the site in the EBA. Moreover, it shows that not only men, who usually tend to engage in hunting larger animals, but also women, who, in sedentary communities, commonly collect wild plants, were familiar with the surrounding landscape at Çukuriçi Höyük. In addition, mobility for both women and men beyond the settlements' limits and fields was not an exception but a practice handed down through generations, which is further evidenced by the hunting of wild animals, the gathering of wild plants, and the collecting of seashells.

iii. Hunting Large and Small Animals

In sedentary societies, hunting does not generally play a significant economic role, but this does not mean that sedentary farmers do not hunt. Dwellers at Çukuriçi Höyük were no exception. Among predominantly sedentary farmers, hunting can either serve as (a) a risk-buffering strategy; (b) a means to establish the balance of power between men and women; and (c) an item for gift and commodity exchange.⁷⁹² Throughout the occupation of Çukuriçi Höyük, the dwellers hunted large and small animals, although in different proportions. During the EBA, the hunters at Çukuriçi Höyük mainly targeted fallow deer. Deer antlers were brought to the site and used as a raw material for tools. Some of the complete and unworked stag antlers were kept within the EBA multifunctional rooms, most likely having symbolic importance.⁷⁹³ They may also have served as a medium for displaying male power. Numerous bear metacarpals⁷⁹⁴

⁷⁹⁰ Emra et al. 2020.

⁷⁹¹ St. Emra, pers. comm. 2019.

⁷⁹² Zvelebil 1992.

⁷⁹³ Horejs – Galik 2016.

⁷⁹⁴ Metacarpals are the long bones within the hand, between the finger and the wrist bones.

may indicate targeted bear hunts for fur, as these bones could be brought to the site along with hides for tanning. The bear bones, attested in a smaller proportion at Çukuriçi Höyük, could also point towards symbolic reasons for bear hunting. Bear ceremonialism was, until recently, widely shared among hunter-gatherer and farming groups across Eurasia and Northern America.⁷⁹⁵ As hunting is commonly carried out by groups of men in sedentary farming societies, the communal organization of hunting activities demonstrates cooperation between men beyond a household unit. However, in various cultures, women do hunt and collect small (edible or usable) animals, such as worms, shells, crabs and small rodents, alongside gathering wild plants.

Regarding maritime wild species, the record shows that dwellers at Çukuriçi Höyük were both gatherers and fishers. Looking at these activities through the ethnographic records, it is possible to suggest that it was most likely the women who collected shells on the shore, whereas the men would engage in fishing.⁷⁹⁶

iv. Non-Specialized Craft Expertise

During the EBA, textile, leather, metal, and pottery production⁷⁹⁷ were identified as the four main non-specialized, or more precisely, craft activities that did not require full-time work at Çukuriçi Höyük. The traces of these activities were identified within mostly multifunctional rooms, which indicates that the four main craft activities were part of the DMP⁷⁹⁸ rather than specialized production solely for exchange.⁷⁹⁹ These activities, however, depended upon both domestic plant cultivation (flax for linen) and animal herding (goat skins for bellows). Leather could be worked from both local domestic and wild animals, and the production of tin-bronze attests the integration of Çukuriçi Höyük into a long-distance exchange of tin, albeit in small amounts, beyond western Anatolia.

v. Gift and Barter Exchange

Apart from tin and possibly large game, another item of exchange during the EBA was obsidian. The Cycladic island of Melos (300km west of Çukuriçi Höyük) was the main source of obsidian during the EBA, but also in previous periods. In phase ÇuHö III, a small proportion of obsidian at the site was from an inland Anatolian source. On the one hand, Çukuriçi Höyük was identified as a gateway for community trade of Melian obsidian during the EBA,⁸⁰⁰ which positions this site in the maritime Aegean world. On the other hand, Çukuriçi Höyük's strategic position close to the Küçük Menderes River delta could have facilitated river-based exchange with the hinterlands of western Anatolia.⁸⁰¹ For differences between the Late Neolithic and EBA mixed regional economies, see Tables 5 and 6.

⁷⁹⁵ Hallowell 1926. Among the Hamar, killing a wild beast such as a leopard, lion, or other carnivore served as a precondition for getting married. A young man needs to kill a wild animal in a communal hunt and bring the skin or claws of the dangerous animal back to the community (Y. Ejigu, pers. comm. 2019).

⁷⁹⁶ Firth 1951; Firth 1983, e.g. Malinowski 1922.

⁷⁹⁷ It is very likely that woodworking (including creating kitchen utensils and weapons, house decoration, and boat making) constituted an important local non-specialized craft expertise. However, this cannot be demonstrated through the material data available since wood (unlike metal and clay) is a perishable organic material in most archaeological contexts (except for waterlogged or desiccated conditions, which was not the case at Çukuriçi Höyük).

⁷⁹⁸ Sahlins 1972.

⁷⁹⁹ For a detailed analysis of craft specialization at Çukuriçi Höyük, see Chapter IV.

⁸⁰⁰ Knitter et al. 2012; Knitter et al. 2013.

⁸⁰¹ The types of regional exchange engaged in at Çukuriçi Höyük and their importance will be further elaborated in Chapter VII.

LATE NEOLITHIC MIXED REGIONAL ECONOMY					
Hunting	Gathering, collecting	Animal herding	Plant Cultivation	Crafts	Regional economies
Big game: red and fallow deer, aurochs, wild boar, leopard Small animals: hares, foxes, eels	Bivalves, gastropods, figs, grapes, pistachios, wild grasses	Cattle, pigs, sheep, goats	Emmer wheat, einkorn, barley, lentils	Textile production, seafaring, Pottery production, Ornament production (beads), stone vessels production, figurines production (Horejs 2019a)	Obsidian exchange, jadeite procurement
		The primary importance of cattle and pigs	The primary importance of cereals	DMP	Trade within the Aegean basin

Tab. 5 Model of mixed regional economies during the Late Neolithic at Çukuriçi Höyük

EARLY BRONZE AGE MIXED REGIONAL ECONOMY					
Hunting	Gathering	Animal herding	Plant cultivation	Crafts	Regional economies
Big game: fallow deer, aurochs, brown bears, leopards Small game: hares, foxes, stoats, eels	Bivalves, gastropods, fish, figs, grapes, pistachios, wild grasses, olives	Goats, sheep, cattle, pigs, dogs	Lentils, fava beans, bitter vetch, barley, emmer wheat, einkorn	Textile production, seafaring, metal production, pottery production	Obsidian exchange, metal exchange (gift, barter, commodity exchange)
Targeted fallow deer hunting	Preferred cockle shells, varieties of fish	The primary importance of sheep and goats	The primary importance of pulses	Intensification of metal production	Aegean basin but also the Near East
The exploitation of wild plants and animals integrated into the mixed farming economy (as a risk-buffering strategy, negotiation of power relations, and possibly commodity exchange)		Mixed farming economy (gardens and possibly fields, usage of animal labor for the draft but not plowing, manure for soil)		Part of the DMP	Inter-regional and supra-regional exchange

Tab. 6 Model of mixed regional economies during the Early Bronze Age at Çukuriçi Höyük

Chapter Summary and Conclusion

The aim of this chapter has been to reconstruct the prehistoric landscape of Çukuriçi Höyük during the EBA through a historical ecology approach, which studies landscapes as a totality made up of humans and the surrounding environment.⁸⁰² Çukuriçi Höyük was a coastal settlement, rich in alluvial soils, surrounded by two rivers which provided a fresh water supply, clay sediments, copper ores, as well as the important stone resources⁸⁰³ for subsistence during the EBA. Oak forests surrounding the site allowed people at Çukuriçi Höyük to extract wood for cooking, metal and pottery production, building materials, boat construction and other purposes during the EBA as well as during the Neolithic.⁸⁰⁴ Since wood was the main fuel used by

⁸⁰² Balée 2002.

⁸⁰³ Schwall et al. 2020.

⁸⁰⁴ Horejs et al. 2015.

dwellers at the site, long-term wood cutting over 600 years could have led to the deforestation of the site's immediate surroundings, possibly supporting the targeted hunting of fallow deer who prefer grassland over the forest (see Fig. 14).

The stratigraphy, botanical and also zoological data indicate that the settlement was occupied by at least two separate consecutive groups: one during the Neolithic, and another group during the Late Chalcolithic/Early Bronze Age. Whereas the Neolithic settlers relied heavily on wheat and lamb/goat meat as their two main items of staple food, the diet of the Late Chalcolithic and EBA dwellers was predominantly based on pulses and lamb/goat meat. However, both of these groups supplemented their diet with wild fruits and nuts as well as large and small game as an integral part of a mixed economy in which game could also be exchanged as a commodity item. Moreover, foraging and hunting may not only signify importance as a risk-buffering strategy, but could also reflect the local transfer of knowledge and skills relating to the non-domestic landscape, including mobility into non-domesticated landscapes. During the Late Chalcolithic and EBA periods, settlers practised small-scale animal husbandry, with a significant proportion of goats that could graze and browse close to the settlement all year round. After the harvest, these goats could graze on fallow fields. Although dwellers primarily relied on domestic animals for subsistence, fish and maritime food was diachronically highly integrated into their subsistence. The latter could have been important identity markers not only during the Neolithic⁸⁰⁵ but also during the EBA.

This data highlights the symbiotic relationship that existed between the people settled at the site and local resources. The chapter demonstrates that the EBA settlers of Çukuriçi Höyük were, apart from cooking, involved in a wide variety of daily activities, which shaped a mixed regional economy on which local society was based. Through diachronic analyses of botanical, zoological, and environmental data, it has been shown that some of the practices performed at Çukuriçi Höyük changed through different '*modes of generation*'.⁸⁰⁶ Although my research topic deals with households and social organization in the Aegean and western Anatolia during the EBA, this chapter was primarily concerned with the landscape context, such as the reconstruction of the landscape at the site of Çukuriçi Höyük, and the inference of relations between the settlers and their surrounding area as reflected in subsistence practices. The people of Çukuriçi Höyük dwelled in, created, and reshaped a multi-faceted landscape during the EBA. In conclusion, I have shown that the integration of EBA Çukuriçi Höyük's inhabitants with the site's immediate surroundings represents an enclosed, self-sustainable ecological system – but not necessarily one cut off from regional exchange networks, which represented socio-economic units until the abandonment of the site around 2750 calBC.

We can draw three important conclusions stemming from this chapter inspired by historical ecology. First, dwellers at Çukuriçi Höyük did not utilize the plough and therefore mixed farming without a plough in smaller plots remains more likely. Second, based on the long tradition of cattle herding at this site, it is likely that the dwellers at Çukuriçi Höyük were organized in patrilineal descent. In addition to domestic animals and crops, they supplemented their diet with wild fruits, nuts, game, fish, and molluscs. Third, households at Çukuriçi Höyük were not only dependent on their immediate environment to reproduce themselves as a community, but they were simultaneously embedded in wider regional exchange networks for craft products such as metals and other goods. This setting can be, summarized under the term *mixed regional economies*. In the next chapter I examine the Çukuriçi Höyük households through the lens of craft organization, which will supplement our understanding of mixed regional economies, here based primarily on the botanical and zooarchaeological evidence.

⁸⁰⁵ Horejs 2019b.

⁸⁰⁶ Bourdieu 1976, 78.

IV. Coppermiths, Homes, and Economies at the Dawn of the ‘Long 3rd Millennium BC’ in Western Anatolia

‘When the barbarian, advancing step by step, had discovered the native metals, and learned to melt them in the crucible and to cast them in molds; when he had alloyed native copper with tin and produced bronze; and, finally, when by a still greater effort of thought he had invented the furnace, and produced iron from the ore, nine-tenths of the battle for civilisation was gained.’

Lewis Henry Morgan⁸⁰⁷

Introduction

Soon after I joined the Çukuriçi Höyük research team in 2016, one of the main insights archaeologists provided about the EBA settlement is that Çukuriçi Höyük was an EBA 1 metal production centre in western Anatolia. But what does that mean? Did inhabitants at this site produce metals mainly for exchange with people in the wider region or for the local inhabitants themselves? Is there an evident separation between households at Çukuriçi Höyük and metalworking workshops? Or, to rephrase the last question: was metalworking at EBA 1 Çukuriçi Höyük a household activity performed within homes or was it conducted within workshops of unrelated, specialized individuals? All these questions occupied my mind and cycled repeatedly while I was reading the archaeological reports. These reports included both evidence from Çukuriçi Höyük and also from contemporary sites in the wider region, where metalworking workshops had already been interpreted as the seats of chiefs. Based on these archaeological conclusions, I have reached my own: metalworking as a craft may be a good proxy for contextualizing not only households at Çukuriçi Höyük, but also for addressing the heterogeneity of socio-political organization in the wider Aegean – more particularly in this case, within the eastern Aegean and western Anatolian ‘cultural koine’.⁸⁰⁸

The following chapter therefore looks at the part-time and full-time specialization of metalworking at Çukuriçi Höyük. It shows that metalworking at this site was organized alongside *generalized craft integration*, as a part-time activity, embedded in the DMP.⁸⁰⁹ Metalworking at Çukuriçi Höyük took place within households, through the participation of men, women, and children in this craft. As households at Çukuriçi Höyük shared metals and metalworking knowledge between themselves, it appears that this record supports the kinship-based organization of metal production and consumption. Kinship-based organization of households at Çukuriçi Höyük has been further supported through anthropological contextualization of the architectural development of the EBA 1 settlement. Regarding household organization, it can be seen that households at this site may have primarily pooled resources and goods within and among local households but they also participated in exchange between households and other groups. Also, metalworking knowledge in this regard was transmitted within households, yet also exchanged and shared between households at the site during EBA 1. This evidence differs starkly from other regional metalworking sites, where metalworking knowledge and the

⁸⁰⁷ Morgan 1877, 45.

⁸⁰⁸ Kouka 2002.

⁸⁰⁹ Sahlins 1972.

associated exotica were pooled and transmitted over generations within the same house, not being shared widely among houses at these other sites. Before I proceed, let me elaborate on the citation from Lewis Henry Morgan above that I chose for the opening to this chapter.

More than a century ago, Morgan argued that the development of what he termed ‘civilisation’ would not have been possible without knowledge of iron smelting.⁸¹⁰ By contrast, it is now known that the emergence of civilization in Mesopotamia and Egypt, which was characterized by the invention of the plough, writing, and the earliest politically and economically centralized cities, preceded knowledge of iron smelting. In fact, the earliest Bronze Age civilisations that emerged at the beginning of the 3rd millennium BC in the Near East lacked the abundance of local sources of copper, tin, and lead ores crucial for smelting copper or bronze and, more importantly, silver, which, by the mid-3rd millennium BC, had become a currency in Mesopotamia. Consequently, the early Near Eastern early states needed to reach out beyond the boundaries of their civilization in search of metals, if such a boundary ever existed.

The ‘long 3rd millennium BC’,⁸¹¹ a label inspired by Wallerstein’s World System Theory, was a time of sweeping changes, transforming societies not only in the Near East but also those within the Mediterranean Basin and along the Indus Valley. These changes consisted of i) the shift towards a drier climate; ii) the expansion of the first large-scale societies (Egypt and Mesopotamia); iii) the development of smaller, but no less novel, societies over the northern half of the Mediterranean Basin; and iv) a dramatic expansion in long-range activities, especially by sea.⁸¹² New human phenomena, namely the emergence of early urban centres with record keeping and writing, metrology, and currency, emerged at the beginning of the 3rd millennium BC in southwestern Asia. Most of these changes did not affect Çukuriçi Höyük, a site two hectares in area located on the western Anatolian coast, close to the modern town of Selçuk. Çukuriçi Höyük’s small settlement size should be understood in comparison to Near Eastern urban sites of over ten hectares. Taking into account the absence of a monumental central building and the absence of record keeping and writing at Çukuriçi Höyük, these comprise some of the major differences between the Near Eastern early state sites and the western Anatolian small-scale sites. However, Broodbank was right to acknowledge that these small societies on the fringes of the Mediterranean were no less novel than those in the Near East in the EBA.⁸¹³ At the dawn of the EBA, Çukuriçi Höyük was an arsenical copper production centre, as is evident from the presence of a large number of metalworking tools and smelting debris corresponding to all the production steps necessary to create various metal objects.⁸¹⁴ The coppersmiths at Çukuriçi Höyük were specialists, but their workshops can reveal many interesting details.

The distribution of metal objects within western Anatolia has been extensively studied from burial and settlement records dating to the EBA 2 period (2700–2400 BC). This period is marked by both the hoarding of metals within monumental public buildings and the concentration of metals in a limited number of graves. The social inequalities apparent in settlement organization largely correspond to those in the burial records. However, for the EBA 1 period (3000–2700 BC), few burial grounds within the region have been extensively excavated. Therefore, EBA 1 social organization at Çukuriçi Höyük and other sites in the region can only be studied through settlement organization. Given that during the EBA 2 metals were associated with elite graves and monumental buildings, the organization of metalworking and the possession of metal objects within an EBA 1 settlement is here taken as the main proxy for

⁸¹⁰ Morgan 1877.

⁸¹¹ Broodbank 2013.

⁸¹² Broodbank 2013.

⁸¹³ Efe 1988; Blum 2016.

⁸¹⁴ Horejs – Mehofer 2015.

assessing differences and social distance – not only between houses and households within a particular village settlement, but also on a regional scale.

In this chapter, I examine the extent to which a house society model fits the record at Çukuriçi Höyük. Firstly, this chapter outlines different anthropological approaches for addressing the material remains of domestic space, followed by a consideration of anthropological and archaeological methods of studying house societies. Secondly, the chapter contextualizes the architectural changes between the Late Chalcolithic and the EBA settlement with respect to ethnographic studies. Thirdly, the chapter addresses the organization of craft specialization, in particular metalworking, at Çukuriçi Höyük through archaeological theories and ethnographic evidence. The final section of this chapter discusses whether metalworking at Çukuriçi Höyük was a specialized craft – practised by a particular group of specialists that could be traced to a specific workshop – or whether copper working was an integral part of the DMP. Comparing the assemblage from Çukuriçi Höyük with other regional EBA 1 sites specifically addresses the question of whether the 'periphery' at the dawn of the 3rd millennium BC in western Anatolia can be seen as a homogenous socio-political unit, or whether superficial similarities in settlement organization blur actual socio-economic differences between the sites.

IV.1. Anthropological and Archaeological Approaches to Studying Domestic Space

To address the questions regarding metalworking raised above, this chapter starts with a diachronic outline of studying houses within socio-cultural anthropology. As will become evident in the course of this chapter, ethnographic studies of houses raised two important issues: gender⁸¹⁵ and kinship.⁸¹⁶ By outlining the developments within socio-cultural anthropology, this first section raises doubts about the direct translation of gender and kinship into archaeology. This will create an understanding for further sections of this chapter, where I address houses at Çukuriçi Höyük as both loci for kinship, craft specialization, and finally, gender. To explore the issue of gender, I am interested in whether the archaeological record at Çukuriçi Höyük supports any clustering of metalworking within male and female spaces of a house, as would be expected following Bourdieu's insights,⁸¹⁷ by which we could support the argument that metalworking at Çukuriçi Höyük might have been an exclusively male skill.⁸¹⁸ Are houses and homes organized according to their gendered composition? This question is in line with the attempt to highlight gender when visualizing units such as prehistoric households.⁸¹⁹ To explore the issue of kinship, I pose the question of whether houses at Çukuriçi Höyük support the house society social organization. I have not included house societies as an ideal type of non-state social organization in Chapter II, but will instead dwell upon a correspondence between house societies and great man societies, as elaborated in more detail below.

An analytical and comparative study of houses developed along with early writings in socio-cultural anthropology. Morgan's *House and House Life of the American Aborigines*⁸²⁰

⁸¹⁵ Bourdieu 1962.

⁸¹⁶ Levi Strauss 1982; Carsten – Hugh-Jones 1995.

⁸¹⁷ Bourdieu 1962.

⁸¹⁸ Metalworking as a male expertise has been statistically supported through a cross-cultural comparison (Murdock – Provost 1973). Based on the cross-cultural sample, the study showed that (Murdock – White 1979) males tend to work hard and tough materials, whereas females commonly work raw materials that are soft and pliable (Murdock – Provost 1973). Therefore, male crafts include metalworking, working with wood, the manufacture of musical instruments, stone working, and working in horn, bone, or shell. By contrast, women are the common producers of leather products, baskets, mats, textiles, and pottery (Murdock – Provost 1973, 211–212).

⁸¹⁹ Tringham 1991.

⁸²⁰ Morgan 1881.

presented the ‘gradual development’ of North and South American houses, corresponding to the three stages of social evolution (savagery – a hut; barbarism – a communal house; civilization – a single family house). One of the main outcomes of his study was the idea that kinship and property relations determine the form and spatial organization of a house: ‘to a very great extent communism in living was a necessary result of the condition of the Indian tribes. It entered into their own plan of life and determined the character of their houses.’⁸²¹ However, with the rise of historical particularism at the beginning of the 20th century, Morgan’s methods and theories sank into oblivion. Even Marcel Mauss, who was certainly not opposed to large-scale comparative approaches in principle, argued in this regard against superfluous evolutionary classification, and proposed studying a local variety of houses:

‘The researcher should not start by looking for the typical house: each house has its own sense. It is absurd to classify a society by a unique mode of dwelling; account must be taken of all the models found in the society, with all their variations, both individual and local: houses for general or specific purposes, for human or for non-human use. Only when such a study has been completed can the notion of a typical house be abstracted without running the risk of confusing houses of rich and poor men.’⁸²²

In socio-cultural anthropology, ‘a house’ was generally understood as a material component of the household as a social unit, but rarely analysed through its material form. Instead, a cross-cultural comparison of houses was addressed by an architect, who argued that a combination of culture, human behaviour, and environment determine the house form.⁸²³ Based on the Human Relations Area Files (HARF), anthropologists showed that the floor area of a house in matrilineal societies is typically much larger than in patrilineal societies,⁸²⁴ as mentioned in Chapter II. Archaeologists have not adopted such markers, despite house sizes being easily measured through archaeological data. Instead, they have focused on cross-cultural studies to build hypotheses rather than interpreting material data.⁸²⁵

Bourdieu’s study of the Kabyle house, one of the most frequently cited investigations of domestic space by anthropologists and archaeologists alike, argues that a house is an ‘*opus operatum*’⁸²⁶ in which the material and the social collide. Among Berber societies, principles of opposition are indefinitely repeated in all areas of existence, including in the spatial organization of a house.⁸²⁷ In analysing how a house’s material oppositions parallel immaterial equivalences (e.g. outside : inside, light : dark, male : female), Bourdieu concluded that ostensibly technical material solutions among Berbers are simultaneously a symbolic as well as a social necessity.⁸²⁸ Although Bourdieu had little respect for discussions of the house form within evolutionary models, like Morgan and Mauss, he understood houses as central features of thought and social organization. The house and village are places in all societies where children embody the practices that structure their existence; just like houses, practices are not static but prone to change.⁸²⁹

The persistent tendency to address symbolism and cosmology rather than discussing processual changes reflecting economic strategies through architecture led to Carolyn

⁸²¹ Morgan 1881, 63.

⁸²² Mauss 2006 [1915], 130.

⁸²³ Rapoport 1969.

⁸²⁴ Ember 1973, Divale 1977.

⁸²⁵ Ensor 2013.

⁸²⁶ Bourdieu 1976, 90.

⁸²⁷ Bourdieu 1970.

⁸²⁸ Bourdieu avoids generalization by pointing out that ‘the dependence of the mythico-ritual system in relation to other systems does not always have the same force and the same form in every society’ (Bourdieu 1970, 153).

⁸²⁹ Bourdieu 1976.

Humphrey's claim that there is 'no place like home in anthropology'.⁸³⁰ Research projects studying houses as objects of ethnographic analysis of visual and material culture⁸³¹ have recently been labelled as 'studies *of*, rather than *with* architecture'.⁸³² 'Studies of architecture', or 'homes' for that matter, give priority to the social and symbolic meanings of the spatial organization of houses, following Bourdieu, rather than their processual character. Understanding all homes as homes-in-the-making – that is to say, homes as never-completed, consumption-driven projects – has recently attracted the attention of ethnographers and designers.⁸³³

Recently, Buchli⁸³⁴ unjustly claimed that archaeologists remain heavily inspired by Morgan's evolutionary perspective of house forms. In addition to the widely cited example of the Kabyle house and Ingold's dwelling perspective, some archaeologists agree that 'there is much more to the house than meets the eye'.⁸³⁵ They have recently called for the study of homes and place-making among hunter-gatherer societies⁸³⁶ and argued that house societies, a model developed by Lévi-Strauss, were a common type of social organization in European prehistory.⁸³⁷

House Societies

In the 1980s, through a systematic restudy of ethnographic material, Lévi-Strauss solved the enigma of Kwakwaka'wakw social organization with the concept of houses. This study, however, was not based on a study of or on a study with a house. The Kwakwaka'wakw, with matrilineal neighbours to the north and patrilineal ones to the south, were located on the islands and mainland northwest of Vancouver, and their social organization puzzled Boas throughout his life. The Kwakwaka'wakw combined contradictory practices, not complying with either matrilineal or patrilineal classification. On the one hand, Kwakwaka'wakw were generally patrilocal with a male head of the family, but on the other hand, the elite households practiced matrilocality and transmission of property, including the name, along the female line.⁸³⁸ Boas understood that the Kwakwaka'wakw had 'a type of structure without equivalent in the archives of ethnology',⁸³⁹ and proposed that the Kwakwaka'wakw developed from a patrilineal to matrilineal society – a line of development unacceptable to Durkheim, Mauss, and Murdock, and many later anthropologists. More than half a century later, Lévi-Strauss revisited Boas' Kwakwaka'wakw data and Kroeber's analysis of the Yurok, whom Kroeber thought had no society as such and no social organization.⁸⁴⁰ However, Lévi-Strauss arrived at a different conclusion:

'In reality, the institutions that support Yurok society do exist: they are, first of all, the fifty-four 'towns' among which the population distributed itself; and, above all, within each town, the 'houses'. At least, the word is out; the same word, as a matter of fact, as the Yurok use to designate these, in principle perpetual, establishments, each bearing a descriptive name and inspired by the location, the topography of the area, the decoration of the façade, the ceremonial function – the name from which is derived that of the one

⁸³⁰ Humphrey 1988, 16.

⁸³¹ Blier 1987; Coote – Shelton 1992; Carsten – Hugh-Jones 1995; Waterson 1997; Fox 1999.

⁸³² Ingold 2013, 10.

⁸³³ Pink et al. 2017.

⁸³⁴ Buchli 2013.

⁸³⁵ Kuijt 2018, 585.

⁸³⁶ Maher – Conkey 2019.

⁸³⁷ Chesson 2003; Borić 2008; Bami et al. 2016; González-Ruibal – Ruiz-Gálvez 2016; Kuijt 2018.

⁸³⁸ Lévi-Strauss 1982.

⁸³⁹ Lévi-Strauss 1982, 170.

⁸⁴⁰ Lévi-Strauss 1982.

or several owners...in this case, as in all those with which the text abound, it is not the individuals or the families that act, it is houses, which are the only subjects of rights and duties.⁸⁴¹

Based on his study of the Yurok, Lévi-Strauss proposed a concept of ‘houses’ as a socio-economic or kinship unit, which he claimed had long been neglected within anthropology. He named this concept ‘*sociétés à maison*’ (house society) and argued that the Kwakwaka’wakw and Yurok were no exception to the rule: house societies had existed in medieval Europe, Japan in the Heian period, and ancient Greece. In all of these cases, the house cuts across all incompatible categories (or ‘logical oppositions’ as Lévi-Strauss understood them) such as patrilineal : matrilineal, patrilocal : matrilocal, endogamous : exogamous categories of descent, postmarital residence, and marriage patterns. Lévi-Strauss defined a house as:

‘A corporate body holding an estate made up of both material and immaterial wealth, which perpetuates itself through the transmission of its name, its goods, and its titles down a real or imaginary line, considered legitimate as long as this continuity can express itself in the language of kinship or of affinity and, most often, of both.’⁸⁴²

Importantly, Lévi-Strauss⁸⁴³ maintained that the house society type of social organization can be ascribed to societies which are strictly hierarchical and in which exogamy and endogamy are not mutually exclusive: the exogamous marriage ensures that new titles can be acquired, and endogamous marriage their maintenance. As house societies could be simultaneously hierarchical but also based on alliance and blood ties, Lévi-Strauss placed the hybrid form of this social organization model along a developmental – if not an evolutionary – scale, between kin-based and class-based societies.

Subsequent studies of house societies have inspired anthropologists working in Southeast Asia since the ‘house’ in this region is also used as an important emic expression of kinship as well as a political-ritual entity.⁸⁴⁴ Outside this geographic area, the Arabic term *bayt* also refers to both a house and a family, but in addition, also to origins and honour.⁸⁴⁵ However, by testing the applicability of the house society model in seven case studies in Southeast Asia and three case studies from Amerindian societies, scholars maintain that the concept of house societies ‘raises as many problems as it solves’.⁸⁴⁶ The contributors to *About the House: Lévi-Strauss and Beyond*,⁸⁴⁷ the proceedings of a symposium on house societies, arrived at two important conclusions. Firstly, they discarded house societies as a type of social organization that complemented traditional kinship theory as being too broad, too inclusive, and inherently evolutionist. Secondly, they welcomed the attempt by Lévi-Strauss to consider a more holistic conception of the house, including its architectural, symbolic, and social importance. Therefore, house societies should be taken as a starting point for future contributions to the emerging body of literature on the anthropology of architecture and, consequently, the home.⁸⁴⁸

Meanwhile, anthropologists working in Melanesia since the 1980s have partially solved the problems Lévi-Strauss⁸⁴⁹ raised in *The Way of the Masks*.⁸⁵⁰ What Lévi-Strauss previously saw as logical oppositions or paradoxical features, since a society can either prioritize descent

⁸⁴¹ Lévi-Strauss 1982, 172–173.

⁸⁴² Lévi-Strauss 1982, 174.

⁸⁴³ Lévi-Strauss 1982.

⁸⁴⁴ Fox 1980; Carsten – Hugh-Jones 1995.

⁸⁴⁵ Gingrich 2012b, 152.

⁸⁴⁶ Carsten – Hugh-Jones 1995, 19.

⁸⁴⁷ Carsten – Hugh-Jones 1995.

⁸⁴⁸ Carsten – Hugh-Jones 1995.

⁸⁴⁹ Lévi-Strauss 1982.

⁸⁵⁰ Godelier 2018.

(genealogy) or alliance (exchange), has proven not to be the case. In Melanesian societies; by contrast, basic units of social organization are an outcome of descent and alliance (and also, to some extent, residence).⁸⁵¹ Godelier noticed that in discussing house societies, Lévi-Strauss repeated the mistake from the *Elementary Structures of Kinship*, in that he prioritized exchange over descent. Instead, Godelier emphasized that in house society systems, alliances were in fact made between houses for the *reproduction and maintenance of the house* (including its material and immaterial wealth), which then demonstrates that descent and alliance played equally important roles among house society systems.⁸⁵² However, the same emphasis on descent and alliance as among the Kwakwaka'wakw, medieval Europeans or Japanese in the Heian period – the examples of house societies listed by Lévi-Strauss – led to different systems of social organization in Melanesia. Today, at least within socio-cultural anthropology, we refer to these not as *house societies* but as *big man* and *great man* models of social organization.

The development of new types, following the house society social structure proposed by Lévi-Strauss, was described in detail by Godelier for Melanesia⁸⁵³ and more specifically for Oro Province in Papua New Guinea by Schwimmer.⁸⁵⁴ The following is a short summary of these developments:

‘At the time, though, Lévi-Strauss could not know that Melanesian societies can be divided into two groups: those in which power is exercised by great men – great warriors and masters of the initiation rituals – and ‘big-men’ societies, where power rests on the accumulation of material wealth (pigs, shells, bird-of-paradise plumes, ceremonial axes, etc.) and women by the headman of certain lineages in their clans ... but in none of those were ‘houses’ found – let alone in great-men societies.’⁸⁵⁵

Although Lévi-Strauss's initial interpretation that Melanesian ethnographic cases represent house society systems of social organization was erroneous, I agree with Schwimmer's comment that ‘Lévi-Strauss has given part of the answer, by inviting us to look at paradoxical features, and that Godelier has given us another part of the answer, by exploring particular paradoxes related to equality and inequality.’⁸⁵⁶

By contrast, the archaeological community has embraced the concept of house societies as originally proposed by Lévi-Strauss.⁸⁵⁷ This concept filled the gap in archaeological kinship studies, which had been largely abandoned after the Schneiderian intervention discarding kinship as ideology, instead promoting the importance of non-kin-based corporate groups, which are easily traceable archaeologically.⁸⁵⁸ Gillespie⁸⁵⁹ explained that the enthusiasm for this approach went so far that young archaeologists would regularly approach her claiming they had identified a house society within the excavated remains of domestic structures.

Although this is an extreme, informed studies of house societies up to this day, at least in the Old World, do not question their existence. They treat house society as a formal analytic model of social organization (despite having been previously rejected by socio-cultural anthropologists, except for a few cases) and provide several bodies of evidence for house societies across long time spans and vast regions. Some scholars argue that the first house societies emerged in Mesolithic Europe, and that the ‘house society remained a deeply rooted form of

⁸⁵¹ Schwimmer 1991; Godelier 2018.

⁸⁵² Godelier 2018.

⁸⁵³ Godelier 2018; see Chapter V.

⁸⁵⁴ Schwimmer 1991.

⁸⁵⁵ Godelier 2018, 191–192.

⁸⁵⁶ Schwimmer 1991, 155.

⁸⁵⁷ Joyce – Gillespie 2000; González-Ruibal 2005; Gillespie 2007; Borić 2008; Bami et al. 2016; González-Ruibal – Ruiz-Gálvez 2016; Kuijt 2018.

⁸⁵⁸ Ensor 2011, 2013.

⁸⁵⁹ Gillespie 2007.

social organization through European prehistory'.⁸⁶⁰ Others place the origin of house societies within the Aegean in the Late Neolithic period and claim that this form of social organization persisted into the Iron Age.⁸⁶¹

Unsynchronized classifications of the emergence of house societies correspond to differences in the interpretation of Lévi-Strauss' model, which caused several difficulties in archaeological investigations. Scholars called for the differentiation of house society as a social organization model from house-centred archaeological investigation,⁸⁶² the abolition of house societies as a stage in social evolution (initially proposed by Lévi-Strauss),⁸⁶³ and a clear distinction from other concepts, such as Hodder's domus, a chiefdom, or urbanism.⁸⁶⁴

Unlike defined archaeological correlations for chiefdoms or tribes,⁸⁶⁵ house societies have not been prescribed by material correlates based on ethnographic data. Despite recognizing houses' material and moral importance, Lévi-Strauss himself had not investigated either Kwakwaka'wakw or Yurok houses. A recent textual and material study of house societies in the Ancient Mediterranean has proposed treating house societies as heterarchically organized (despite Lévi-Strauss's claim that they are hierarchical), in which case 'certain houses become more powerful than others, attain a certain degree of centralization and then vanish before their accumulated power manages to produce a truly monarchic, territorial state'.⁸⁶⁶ With an emphasis on houses in the 'plural',⁸⁶⁷ this highlights competition between houses for wealth and prestige.

Importantly, theoretically well-informed archaeological literature on house societies⁸⁶⁸ and numerous empirical cases of house societies in European prehistory⁸⁶⁹ entirely dismiss the literature on big man and great man societies. In none of these contributions are there any references to the Papua New Guinea and wider Melanesian literature that expanded the original concept of house societies for non-state constellations without a permanent, centralized, and hereditary authority. Instead, the most archaeologists remained 'faithful' to Lévi-Strauss⁸⁷⁰ while socio-cultural anthropologists have highlighted his mistakes and improved his typology.

Before moving on to the next section, I briefly discuss the paradoxical features, observed by Lévi-Strauss, which were the basis for the development of a concept of house society, but which were only seen as paradoxical or logical oppositions because of his structuralist point of view. This is of particular importance since, like Lévi-Strauss, archaeologists discussing house societies have taken logical or paradoxical contradictions within the house society model for granted, although there are other ways to understand them, as shown by Melanesian anthropologists and Louis Dumont. These scholars emphasized the need to look at structural oppositions (e.g. egalitarianism vs. hierarchy, elementary vs. complex kinship systems, endogamy

⁸⁶⁰ Borić 2008, 133.

⁸⁶¹ González-Ruibal – Ruiz-Gálvez 2016.

⁸⁶² Gillespie 2007.

⁸⁶³ González-Ruibal – Ruiz-Gálvez 2016.

⁸⁶⁴ González-Ruibal – Ruiz-Gálvez 2016.

⁸⁶⁵ Service 1962; Sahlins 1968; Renfrew et al. 1974; Earle 2002.

⁸⁶⁶ González-Ruibal – Ruiz-Gálvez 2016, 385–386.

⁸⁶⁷ Gillespie 2007; González-Ruibal – Ruiz-Gálvez 2016; Relaki – Driessen 2020.

⁸⁶⁸ E.g. Gillespie 2007; González-Ruibal – Ruiz-Gálvez 2016. In this discussion, I exclude the discussion of households as analytical units or household archaeology (e.g. Souvatzi 2014; Souvatzi 2008; Müller 2015; Pfälzner 2015). In particular, Stella Souvatzi's work on Neolithic households had an important impact on the study of households in Aegean prehistory as she showed that the bottom-up studies of the household need to be 'fully and genuinely taken into account' for understanding long-term socio-economic changes (Souvatzi 2014, 247). Here, I exclusively focus on those archaeological studies which established the use of the house society as an ideal type of social organization in European prehistory rather than households as analytical units.

⁸⁶⁹ González-Ruibal 2005; Borić 2008; Bami et al. 2016; González-Ruibal – Ruiz-Gálvez 2016; Kuijt 2018.

⁸⁷⁰ For an innovative perspective on the House (with a capital H), by moving away from the original Lévi-Strauss's definition of 'sociétés à maison' (house society), see Letesson – Driessen 2020.

vs. exogamy, woman vs. man) not as *complementary oppositions*, which are mutually exclusive, but instead as *hierarchical oppositions*, present in both non-state and state societies.⁸⁷¹

Following Dumont, an important distinction can be made between how hierarchy is perceived among 'non-modern' pre-Enlightenment societies and 'modern' ones. Dumont showed that whereas non-modern societies accept hierarchy as self-evident and unquestionable, most modern ideologies regard hierarchy as unnecessary and undesirable. Despite the fact that in both cases the ideology may be built upon more or less 'egalitarian' values, some sort of hierarchy always exists in those societies in practice, building upon a dialectic axiom that any form of distinction (e.g. man vs. woman, male vs. female) is a hierarchical opposition.⁸⁷² Or, as Parkin has excellently paraphrased Dumont's thinking:

'The fact that equality is presented as a value does not mean that hierarchy is absent in other, perhaps non- or less ideal aspects of the culture. In fact, it will almost certainly be present somewhere ... on a lower level of the ideology, where it may well occur as a matter of practice.'⁸⁷³

Dumont's thinking inspired the recent volume *Hierarchy and Value*,⁸⁷⁴ one section of which provides a thorough review by Robert Parkin of Dumont's thinking and its implications within socio-cultural anthropology.⁸⁷⁵ In his concluding remarks, Parkin summarized Dumont's understanding of hierarchy:

'It should be obvious that Dumont's insistence on the necessity of hierarchy is purely intellectual and relates to the invariant structure of his chosen model; it is in this sense that he thinks that hierarchy is unavoidable. His critics notwithstanding, nowhere to my knowledge does he put forward hierarchy as a prescription for the organization of society, express a personal preference for it, or advocate the perpetuation of social inequalities.'⁸⁷⁶

Regarding more or less 'egalitarian' societies, the coexistence of hierarchy between houses (e.g. in terms of prestige or affluence) but also within houses (e.g. age and gender differences) have already been highlighted in the case of southwestern Saudi Arabia,⁸⁷⁷ great man societies in the highlands of Papua New Guinea,⁸⁷⁸ Melanesian big man societies,⁸⁷⁹ Pacific Northwest Coast foragers,⁸⁸⁰ and complex hunter-gatherer and more sedentary tribal groups in South-eastern Asia and the Pacific Northwest Coast.⁸⁸¹ Although none of these contributions were studying house society systems of social organization *per se*, scholars have understood that hierarchies (e.g. men's control of women), as well as competition and cooperation between houses, do also exist within more or less 'egalitarian' sedentary societies.

Following this discussion of the archaeological markers of house societies⁸⁸² and the anthropological understanding of big man and great man societies, I now present an archaeological case study. If the plurality of houses competing for higher status is the main characteristic

⁸⁷¹ Dumont 1980.

⁸⁷² Dumont 1980.

⁸⁷³ Parkin 2003, 44.

⁸⁷⁴ Hickel – Haynes 2018.

⁸⁷⁵ Parkin 2003.

⁸⁷⁶ Parkin 2003, 220.

⁸⁷⁷ Gingrich 2012b; Gingrich 2015a.

⁸⁷⁸ Godelier 1986a; Godelier 1991.

⁸⁷⁹ Godelier 1991.

⁸⁸⁰ Wengrow – Graeber 2018.

⁸⁸¹ Hayden 1995; Hayden 2011.

⁸⁸² González-Ruibal – Ruiz-Gálvez 2016.

of acquiring and maintaining differences in status in house societies,⁸⁸³ then differentiated access to copper production and consumption will here be taken as the main proxy for discussing the socio-economic differences between houses at Çukuriçi Höyük.

IV.2. Continuity and Change among Houses at Çukuriçi Höyük

By looking into the houses at Çukuriçi Höyük in a diachronic manner, from the Late Chalcolithic to the EBA 1 period, the main motivation behind this section is to address change and continuity in dwelling between and within the two periods. Did houses and households maintain the same internal or external organization of space during the Late Chalcolithic and the EBA 1 period? Were they used in the same way? What was the logic behind the agglutination of the Çukuriçi Höyük settlement at the dawn of the Bronze Age? What can we possibly say about the kinship system at Çukuriçi Höyük, this time not based on subsistence (e.g. cattle breeding might support patrilineal descent as proposed in Chapter III) but based on the development of the settlement pattern at the site, considering that the architecture might be ‘itself a kind of code – one of the cognitive registers on which people draw to represent kinship structures to themselves’.⁸⁸⁴ In this section, the development of the EBA 1 settlement at Çukuriçi Höyük supports a patrilineal kinship structure based on considerable architectural and structural similarities to the two villages studied ethnographically.

The EBA 1 site of Çukuriçi Höyük was built upon the earlier Late Chalcolithic settlement. During the preceding Late Chalcolithic period (ÇuHö VII–Vb: 3350–3050 calBC) the architecture is dominated by freestanding buildings and installations. In the earliest phase ÇuHö VII, a ditch was detected. In the subsequent phase ÇuHö VI, remains of a stone-row-structure and presumably freestanding architecture, indicated by linear wall sections, were built upon the filled ditch in sub-phase VIb. Remains of a rectangular building and a stone-row-structure were discovered in sub-phase VIa. In phase ÇuHö VI, stone-row structures found attached to architectural remains were used as drying platforms. In phase ÇuHö V the outline of the excavated area changed despite these installations remained in use in context of an area used for food processing and storage activities. In both sub-phases ÇuHö Vb and Va the platforms were found next to small round buildings (for changes in settlement planning see Tab. 7). The destruction by fire in all settlements is attested to have spread across the excavated area at the end of all five Late Chalcolithic settlement (sub-)phases (ÇuHö VII–V), including the open and closed spaces. The reasons for the destruction of the settlement are not entirely clear, but the explanation that an attack or ritual burning rather than an accident caused the fire seems more feasible. A number of sling bullets found within the burnt layers and the widespread nature of the fire throughout the settlement support the former interpretations.⁸⁸⁵

The Late Chalcolithic architecture at Çukuriçi Höyük generally corresponded to the building trends in contemporary eastern Aegean islands and western Anatolian coastal sites. Within this region, a combination of freestanding rectangular, apsidal, and round houses has been recorded at other Late Chalcolithic sites. By contrast, the hinterland sites in western Anatolia during the Late Chalcolithic period were composed solely of rectangular houses, a feature that became the norm in EBA 1 western Anatolian coastal sites.⁸⁸⁶ During the Late Chalcolithic period, the settlers at Çukuriçi Höyük relied on mixed subsistence, based on the cultivation of domestic crops such as wheat and pulses and herding domestic animals, predominantly

⁸⁸³ Gillespie 2007; González-Ruibal – Ruiz-Gálvez 2016.

⁸⁸⁴ Healy – Szoltysek 2017.

⁸⁸⁵ For a complete and detailed overview of Late Chalcolithic settlements at Çukuriçi Höyük and their interior/exterior structure, see Schwall 2018, 164–167.

⁸⁸⁶ Horejs – Schwall 2015.

Date	Phase	Description
Early Bronze Age 1 2850–2800/2750 calBCE	ÇuHö III	Agglutinated settlement of rectangular structures sharing lateral walls
Early Bronze Age 1 2950/2900–2850 calBCE	ÇuHö IV	Freestanding rectangular structures become agglutinated by sharing lateral walls
Early Bronze Age 1 3050–2950 calBCE	ÇuHö Va	Freestanding round building; stone-row-structure; the settlement was destroyed by fire
Late Chalcolithic 3110–3050 calBCE	ÇuHö Vb	Freestanding round building; stone-row-structures; the settlement was destroyed by fire
Late Chalcolithic 3270–3110 calBCE	ÇuHö VI	ÇuHö VIa: Remains of a rectangular building and a stone-row-structure; the settlement was destroyed by fire ÇuHö VIb: The former ditch was built over with presumably freestanding architecture indicated by linear wall sections and a stone-row structure; the settlement was destroyed by fire
Late Chalcolithic 3350–3270 calBCE	ÇuHö VII	A ditch; the settlement was destroyed by fire

Tab. 7 Changes in domestic architecture from the Late Chalcolithic to EBA 1 at Çukuriçi Höyük

sheep and goats. The settlers also relied on the hunting of large and small game, fishing, and collecting shells and wild plants. Their pots were handmade and of local origin, and the dwellers at Çukuriçi Höyük were already familiar with smelting copper. While their subsistence strategy largely remained the same as in the EBA 1 period, this cannot be said for their house architecture.

Over the course of the EBA 1 phase ÇuHö IV, which lasted approximately 100 years, the burnt settlement belonging to ÇuHö Va phase was levelled and a new dwelling pattern was developed. In Phase ÇuHö IV, free-standing rectangular houses replaced the free-standing round ones belonging to ÇuHö Va. However, the characteristic free-standing buildings that were common throughout the Late Chalcolithic, over a period of around 400 years, lasted only for about 25 years during EBA 1. Four building phases point towards the gradual development of the agglutinated EBA 1 village through the multiplication of houses. The previous open spaces between the dwellings gradually became enclosed, following a particular pattern (see Fig. 18). The newly erected houses were not 'free-standing', but were always laterally attached to a pre-existing house.⁸⁸⁷

If we are to seriously consider that the residents of a particular village or settlement in most cases follow the pattern that is already established when erecting a new house, that residence rules may correspond to a kinship system,⁸⁸⁸ or that in some cases it is in 'living and consuming together in houses that people become complete persons – that is, kin',⁸⁸⁹ then it becomes undeniable that coresidence, commensality and living on the same land are some of the common ways of establishing kinship.⁸⁹⁰ If this understanding is applied to the EBA settlement pattern

⁸⁸⁷ For a detailed archaeological publication of the EBA architecture at Çukuriçi Höyük, see Grasböck et al. in press.

⁸⁸⁸ Fox 1999.

⁸⁸⁹ Carsten 2004.

⁸⁹⁰ Practices of establishing kinship relations can be divided into those which are more or less commonly shared. Thus, coresidence, commensality, living on the same land, and friendship can be classified among the more commonly shared means. Examples of less commonly shared practices of becoming kin include the following: being born on the same day, following the same taboos, surviving a dangerous sea or ice voyage, or having a shared name (Sahlins 2013, 68).

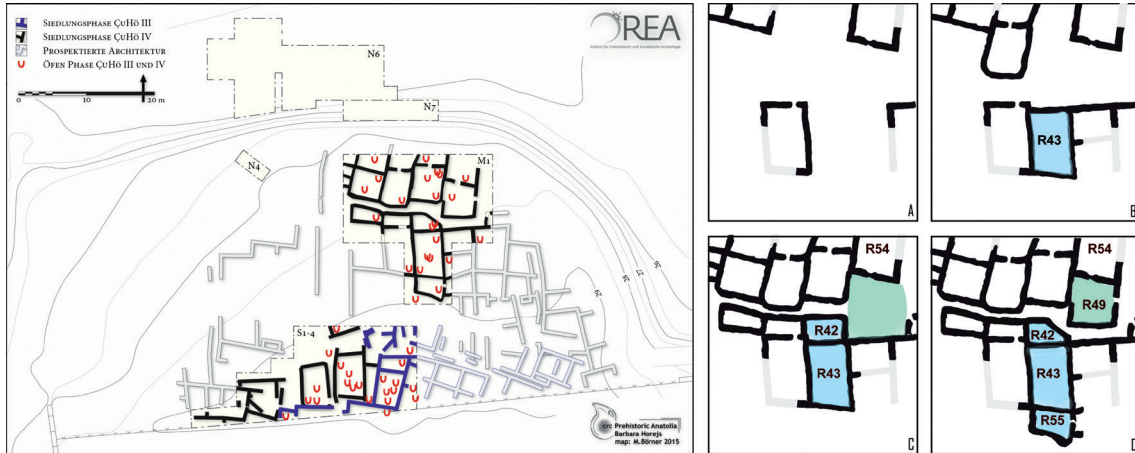


Fig. 18 The EBA 1 settlement pattern at Çukuriçi Höyük and the adjustment of room 42 (R42), (red dots = ovens) (ERC Prehistoric Anatolia/OeAI, M. Börner, B. Horejs)

at Çukuriçi Höyük, then we can postulate that the processual (dis)continuities in settlement patterns, such as the construction of walls, the agglutination of houses, and the narrowing of open areas, are the material artefacts of boundary making within and between social groups and persons who resided within those houses over a period of 100 years. Although kinship or relatedness cannot be traced through material remains alone, the established residence rule of constructing new houses next to pre-existing ones is not unique to Çukuriçi Höyük. Similar residence patterns have been observed ethnographically among sedentary farming groups in moderate and tropical zones, which will here serve as a means of contextualization of the EBA architectural developments at Çukuriçi Höyük.

A detailed ethnoarchaeological study of thirty-seven small-scale agricultural villages was conducted in the 1970s in Khar o Tauran, in northeastern Iran.⁸⁹¹ Particular to this study was not only its documentation of a static settlement pattern within a village, commonly recorded by socio-cultural anthropologists,⁸⁹² or snapshots of settlement patterns and their design or size compared to each other by prehistoric archaeologists.⁸⁹³ Instead, Horne⁸⁹⁴ documented the diachronic reconstruction of agglutination processes and diachronic social relations between the dwellers at these sites. In Tauran villages, once a single rectangular house or a group of free-standing rectangular houses had been constructed, all subsequent houses were built in relation to the pre-existing ones, by repeating the previous orientation. The repeated orientation of houses can also be observed from the circular settlement pattern of the matrilineal Omarakana village in the Trobriand Islands⁸⁹⁵ or the patrilineal Matautu village among the Tikopia.⁸⁹⁶ In the case of the Omarakana village, houses were built in two concentric circles with doors facing the central open dancing and burial ground, the chief's dwelling, and his storage house. At Matautu, the longer sides of the rectangular houses, built in a grid-like pattern, followed the shoreline with doors facing the shore.⁸⁹⁷ In the latter two cases, the rectangular dwellings

⁸⁹¹ Horne 1994.

⁸⁹² Malinowski 1929, 8; Firth 1959, 188; Firth 1983, 49; Mosko 2013.

⁸⁹³ Renfrew 1972, 225–264; Fidan et al. 2015; Naiboğlu 2019.

⁸⁹⁴ Horne 1994.

⁸⁹⁵ Malinowski 1929, 8.

⁸⁹⁶ Firth 1959, 188; Firth 1983, 49.

⁸⁹⁷ For a diachronic study of the abandonment of old houses and the construction of new ones at Tikopia following a hurricane, see Firth 1959.

were free-standing, but in Tauran, as at Çukuriçi Höyük, the new houses were instead attached to the pre-existing ones.⁸⁹⁸

Villagers in Tauran associated the erection of new houses with marriage since a newlywed couple usually set up a new household close to the groom's parents. Based on the repeated and well-established pattern of post-marital patrilocal residence, the spatial proximity between households within a particular Tauran village corresponded to kinship distance between domestic groups. As these villages were located in the plains and lacked enclosures, the reason for agglutination cannot be ascribed to a circumscribed area within the enclosure walls. In addition, warfare or defence purposes were not responsible or partly responsible for this form of village nucleation. Horne, in his ethnoarchaeological study focusing on the histories of persons and houses, argued that building decisions in Khar o Tauran are 'bound by the past (*via inheritance, field holdings, and kinship*), and new building takes account of existing (or forecast) structures and *social relationships*'.⁸⁹⁹ Horne⁹⁰⁰ showed that the ostensibly unplanned and irregular design of these villages was the outcome of marriage and social relations, and these building practices were transmitted across the generations. The spatial proximity between households of close kin (father-son) encouraged cooperation, which was of specific economic importance in Tauran (see Fig. 19). The villagers practised mixed farming, combining agriculture with transhumance, in which different but closely related households pooled their labour for subsistence. In addition to these socio-economic reasons, the agglutinated pattern was well adapted to the local climate, as the closely built houses generated more shade in the summer and served as a windbreak in the winter. Horne claims in connection with these environmental reasons for the agglutinated village structure that 'those benefits seem to be by-products of social and economic goals rather than goals in themselves'.⁹⁰¹ The current villagers could not recall ceramic and copper production in Khar o Tauran, but these settlements were located close to shallow copper mines and clay resources in the alluvial plains that were exploited in prehistory.⁹⁰²

The correspondence between spatial proximity and kin distance was also confirmed by a recent interdisciplinary study of 51 rural Thai villages in the Nang Rong district that had been settled 50 years prior to the investigation. These villages displayed a similar pattern as that recorded in Khar o Tauran. In Nang Rong, the members of a new generation that remained in the village aimed to construct a new building close to their parents or their in-laws. Kin and spatial proximity clearly overlapped in the village formation phases, but the correspondence became harder to trace once the empty space between the houses had been filled.⁹⁰³ An extended family group, residing in a multiple-room dwelling, sharing food and pooling labour, was also reported among agricultural villages in Arabia and the Levant.⁹⁰⁴ In addition to these studies, anthropologists have argued that domestic architecture necessarily reflects a group's social organization⁹⁰⁵ and symbolic structuring principles.⁹⁰⁶ Understood in this way, these changes in domestic architecture in non-state societies ought to correspond to changes in social organization. A close relationship between the two was observed by Raymond Firth during his long-term ethnographic fieldwork among the Tikopia:

⁸⁹⁸ For an archaeological reconstruction of architectural patterns and the corresponding residence patterns, see Ensor 2013.

⁸⁹⁹ Horne 1994, 120, *italics mine*.

⁹⁰⁰ Horne 1994.

⁹⁰¹ Horne 1994, 120.

⁹⁰² Horne 1994.

⁹⁰³ Verderya et al. 2012.

⁹⁰⁴ Kramer 1982; Heiss 2006.

⁹⁰⁵ Morgan 1881.

⁹⁰⁶ Bourdieu 1970.

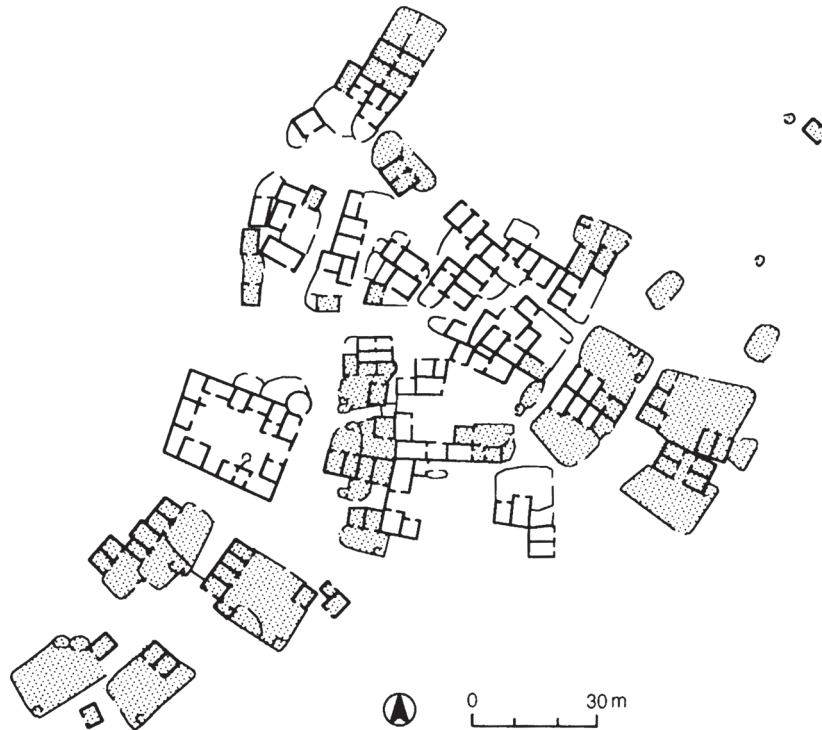


Fig. 19 Settlement organization and the process of expansion at Khar o Tauran (Horne 1994, fig. 17)

‘Change of dwelling place is not simply a material change. It reflects structural considerations, and personal choices. It may be related to principles of descent and inheritance; it may mean change in size or constitution of residential kin groups; it may have repercussions on relations with neighbors. In short, physical movement may relate to the concept of what makes up a proper social unit.’⁹⁰⁷

By considering a close material change in domestic organization to reflect social organization, we can return to the case study of Çukuriçi Höyük. Before and after the fire burnt down the Late Chalcolithic village, the settlers used local materials for house construction; houses had one-metre-tall stone foundations built from two rows of quarry stones which were supplemented with mudbrick walls and a wooden roof.⁹⁰⁸ Like metal smelting, which was identified in both phases, building techniques were transmitted through the generations. The settlement pattern, however, changed dramatically after the fire episode. Previously free-standing Late Chalcolithic round houses disappeared in the transition into the EBA. In comparison to Late Chalcolithic round houses, the EBA house sizes shrank, and an agglutinated village pattern replaced a somewhat dispersed one. While Late Chalcolithic metalworking was located in open areas, during the EBA metal production moved into the houses. This partial uprooting of material culture linked to domestic structures after the fire episode remains difficult to understand. It could be due to several reasons such as a communal decision to change the settlement pattern,

⁹⁰⁷ Firth 1959, 183. A correspondence between the fission of domestic groups, the transmission of property, and changes in domestic architecture was also documented among the LoDagaa (Goody 1971 [1958]b). Among the Baruya, changes in house architecture derived from new contacts established with ‘neighbours’. After the coming of the white people, the Baruya learned how to weave pieces of bamboo together and they substituted round walls made of bark with walls made of bamboo. After ten years or so, they started to build rectangular houses divided into two or three rooms to copy the houses of the white people who settled in the valley under Australian colonization (M. Godelier, pers. comm. 2019).

⁹⁰⁸ Grasböck 2013.

a partial change in population after an attack, or borrowing from neighbouring groups. In all possible cases, change in social organization between the Late Chalcolithic and EBA 1 was inevitable. Given that 'in oral societies the cultural tradition is transmitted almost entirely by face-to-face communication; and changes in its content are accompanied by the homeostatic process of forgetting or transforming those parts of the tradition that cease to be either necessary or relevant,'⁹⁰⁹ the EBA 1 settlers at Çukuriçi Höyük needed to 're-invent' themselves. They abandoned round houses but retained the same building techniques. They remained the gatekeepers of metal smelting knowledge but shifted its production inside their houses. They abolished the Late Chalcolithic installations for drying wild fruits in the open areas but continued to collect and consume them during EBA 1. Apart from the first building phase, none of the subsequent newly built rooms were designed as free-standing, but were instead attached to the pre-existing houses. Considering the similarities with the two ethnographic studies from Tauran and Nang Rong, it is evident that this pattern is neither unique to Çukuriçi Höyük nor to prehistory. Although this type of domestic pattern was based on patrilocal residence and patrilineal descent in both cases, scholars remain critical of the imposition of descent rules onto limited archaeological data.⁹¹⁰ However, based on the small settlement size at Çukuriçi Höyük (not exceeding two hectares) we can also draw some comparative insights.

The settlement size and village population can be further inferred through ethno-archaeological examples. The study of Tauran villages in northeastern Iran showed that the settlement size correlated with the number of residents. A village size between 0.5 and 2.23 hectares never accommodated more than 200 residents⁹¹¹ (see Tab. 8), and the rather small resident population can be explained through the functionality of these structures. Half of the buildings in Tauran villages were houses for human habitation, whereas the other half were animal sheds – sheltering mainly sheep and goats, as well as agricultural equipment.⁹¹² Given that the settlement of Çukuriçi Höyük was limited to an anthropogenic mound of 2 hectares, then even if all the structures were built for domestic use, the residential group could hardly exceed 400 residents. However, intermarriage within a group smaller than 500 individuals may have had problematic implications and therefore most village groups of similar size are partially exogamous,⁹¹³ which was also the case in Tauran. Considering that marriage in non-state societies serves as a means of alliance,⁹¹⁴ creating peace between different groups,⁹¹⁵ then cooperation between villages for the exchange of goods and marriage partners may result in some homogenizing behaviour across different sites.⁹¹⁶

Cultural homogeneity between the coastal EBA 1 western Anatolian sites has previously been inferred from the visible connectivity between sites (the exchange of obsidian and metal tools) but also shared house architecture (agglutinated settlement). The regional homogeneity (except for Çukuriçi Höyük) includes the presence of enclosure walls during EBA 1, which may partly explain settlement agglutination, but cannot be seen as the main reason for it. These shared cultural traits across the region led scholars to argue for the existence of an

⁹⁰⁹ Goody – Watt 1963, 344.

⁹¹⁰ For Çukuriçi Höyük, a patrilineal kinship structure has been proposed based on subsistence (see Chapter III) and the small size of domestic structures (see Chapter II). The gradual agglutination of the EBA settlement at Çukuriçi Höyük furthermore supports the patrilineal kinship structure, based on considerable architectural/structural similarities with Khar o Tauran (Horne 1994) and Nang Rong (Verderya et al. 2012) villages.

⁹¹¹ Kramer 1982, 59, tab. 2.

⁹¹² Kramer 1982.

⁹¹³ Wobst 1974; Wobst 1976.

⁹¹⁴ Lévi-Strauss 1969.

⁹¹⁵ Sahlins 1968.

⁹¹⁶ Bintliff 2010.

TABLE 2: POPULATIONS, AREAS, AND DENSITIES OF CENTRAL TAURAN VILLAGES

Village	Population	Area (ha)	Density
Baghestan	148	1.89	78.31
Barm	124	1.56	79.49
Eshqvan	174	2.23	78.03
Faridar	80	1.06	75.47
Jafarabad	82	1.09	75.23
Kariz	104	1.24	83.87
Nahar	39	0.76	51.32
Nauva	36	1.15	31.30
Salehabad	112	1.94	57.73
Trghmar	27	0.39	69.23
Zamanabad	178	1.86	95.70
Hojjaj	82	1.06	77.36
Talkhab	49	0.97	50.52

Sources: For the villages of Hojjaj, Ravazanag, Talkhab, and Zivar: aerial photographs, 1956 series and 1969 series, supplied by the National Geographic Centre, Teheran. For the rest, aerial photographs, 1969 series, supplied by the National Geographic Centre, Tehran, and Iran 1973a.

Note: Mean village population, 95.0 persons; mean village area, 1.32 hectares; mean density, 69.50 persons/hectare. For correlation between population and area, Pearson's product-moment correlation coefficient $r = .905$, $r^2 = .82$. $p \leq .0001$

- a. Column 3 indicates all space within the village perimeter, including courtyards and unroofed areas.

Tab. 8 Correspondence between settlement size and population at Khar o Tauran (after Horne 1994, tab. 2)

EBA 1 Eastern Aegean and western Anatolian 'cultural koine'.⁹¹⁷ Although shared house architecture may emerge due to borrowing between neighbouring groups, it seems more likely that the circulation of material objects – such as obsidian and metals – was complemented by the circulation of people between sites. Regarding demographic factors, commonly shared small settlement size (below 2 hectares) corresponding to a small number of village members (below 400 individuals) necessarily implies the recruitment of marriageable partners beyond a single settlement in ensuring smooth social reproduction across the generations throughout the EBA 1 of western Anatolia.

Cooperation at Çukuriçi Höyük

Within the excavated area at Çukuriçi Höyük, the village agglutination during EBA 1 created two blocks, separated by a street running east–west (see Fig. 18). Given the ethnographic

⁹¹⁷ Kouka 2002; Kouka 2016a. The term 'cultural koine' has so far not been contested within the archaeological literature, despite being borrowed from linguistics, where it denotes a standard language or dialect that has arisen as a result of contact between two groups speaking different dialects of the same language.

parallels from Khan o Tauran and Nang Rong showing that kin distance and spatial proximity may correspond, closer cooperation between groups on each side would be expected. Yet, cooperation was not spatially or socially bounded within the two blocks of building. The neighbourhoods⁹¹⁸ on each side of the street needed to cooperate in order to allocate the previously open space and to navigate the construction of shared walls.⁹¹⁹ This can best be observed from the final building phase. In order to attach room 49 to room 54, the residents across the street needed to compromise over the northeastern corner of room 42 to ensure that the east–west-running path remained open (see Fig. 18, R49, R43, R42). This resulted in the trapezoid shape of room 42, a design that shows no similarity to any other building in the settlement. By thinking 'outside the box' and reshaping room 42 from rectangular to trapezoid, the two parties on the opposite sides reached a compromise. In fact, this compromise resulted in the loss of some land for the residents of room 42, but this dwelling group (room 42 and room 43) compensated for this with the attachment of a new room, room 55, south of room 43 (see Fig. 18 right, R42, R43, R55). Reciprocal cooperation between houses not only benefitted the two parties involved, but all members of the village. They could continue to use the pre-existing infrastructure, namely the path, enabling continuous and undisturbed communication and mobility between the east and west of the village settlement.

The same case also highlights an emic understanding of the 'age groups' of houses. The older House 54 was built during the first building phase, whereas the younger House 42 was attached to the pre-existing one only during the third building phase. It was the latest of the two houses that compromised a corner of its room to allow House 54 to expand and become a house consisting of two rooms, an arrangement that became the norm at Çukuriçi Höyük during the third building phase. Therefore, both cooperation and age-groups associated with houses may have existed at Çukuriçi Höyük during EBA 1. Following Firth and Goody, who argued that the reorganization of houses also reflects a group's standard domestic unit, a house consisting of at least two rooms did become the norm over the course of 100 years at Çukuriçi Höyük.⁹²⁰

Behind the Walls: Metalworking at Çukuriçi Höyük

Çukuriçi Höyük was an EBA 1 copper-smelting production site.⁹²¹ How was copper working organized within this settlement? Were the coppersmiths associated with a particular house during the EBA? How did they access the necessary resources for smelting? Finally, was there a visible distinction between the houses of metal producers and those of metal consumers? As a fire installation is an integral part of a metalworking toolkit, the distribution of fireplaces within the settlement may reflect the spatial organization of metalworking. From both EBA 1 phases (ÇuHö III and IV), a total of 49 fire installations have been excavated, of which 26 were classified as bowl- and shoe-shaped furnaces used for metalworking and other household activities (see Fig. 18).⁹²² Most of the fireplaces were found inside houses and not in the open areas (see Fig. 18). The ovens are of two types, bowl- and horseshoe-shaped, but none of the ovens could be exclusively linked to copper production as the same ovens were also used to cook food. Items linked with metal production (including clay tuyères, moulds, slag,

⁹¹⁸ Within Near Eastern ethnographic accounts, neighbourhoods are commonly referred to as *mahalle* (Turkish), *ماحلة* *maḥallā* (Arabic), or *ماحلة* *maḥallā* (Persian). During the Ottoman Empire, *mahalle* was the smallest administrative unit.

⁹¹⁹ Spatial proximity, including sharing common walls or courtyards, certainly enhances cooperation but can also frequently lead to conflict. Conflicts regarding spatial organization and claims of land have been well documented within a densely built Sicilian town (Schneider 1969; Schneider 1971).

⁹²⁰ A house consisting of two or three rooms also became typical at other contemporaneous sites during EBA 1.

⁹²¹ Horejs 2009; Horejs et al. 2010; Mehofer 2014; Horejs – Mehofer 2015; Mehofer 2016; Horejs 2016b; Horejs et al. 2017.

⁹²² Horejs – Mehofer 2015.

unfinished and finished metal items), but also grinding stones, tripod cooking pots, and bone stirring spoons linked to food preparation were commonly found close to the ovens.⁹²³ Apart from cooking and metalworking, the ovens were also used for the disposal of food waste, namely fish bones and molluscs.⁹²⁴

The 33 fire installations within Phase IV were not all contemporaneous. Within the rooms, hearths were mostly located in the centre and rebuilt in the same spot after the floor had been replastered. Apart from the fire installations located in the centre, hearths and ovens were also found in the corners of the rooms. Two or more fireplaces could be in use contemporaneously, but their position moved within the use-life of a single house, and does not indicate a strict continuity in either the location or number of fireplaces transmitted through generations.

Like the fireplaces, single rooms do not indicate any specialized use. Food storage, food preparation, the consumption of meals, the disposal of food as well as craft production such as textile, leather, and metalworking, can all be traced within a single room at Çukuriçi Höyük. From the data analysed so far, it remains difficult to trace the boundaries of a single household unit. What is evident from the assemblage at Çukuriçi Höyük is that metal production, food consumption, and small-scale craft activities overlapped spatially and coexisted temporally within houses. Metalworking at this site was not confined to a single workshop, but was scattered across the settlement, associated with other domestic activities that took place simultaneously.

Regarding the distinction between houses involved in metal production and those in consumption, there is likewise no sharp line dividing the two. Although the production and consumption of metal coexisted within the same house, some houses show less involvement in metal production than others during a particular building phase. Even those houses lacking evidence of metal production within a particular phase contained metal finds. This implies that members of those houses, at times not involved in metal production, had access to metal tools.

At Çukuriçi Höyük, arsenical copper alloys represent three-quarters of the assemblage found (an axe, chisels, pins, needles, metal bars, daggers, an arrowhead (see Fig. 20). A small number of metal pieces consisted of pure copper alloys, whereas tin bronze was of negligible importance. Among precious metals, two broken silver-copper rings and gold beads were found close to the oven in the open area. According to geological analysis, copper, silver, lead, and gold ores existed in the vicinity of the site, but tin needed to be imported.⁹²⁵ Since the most important items produced at the site were arsenical copper, dwellers at Çukuriçi Höyük were largely not dependent on ores from outside. Tin sources may have been imported from the Troad region, which implies a loose regional interdependency between the sites. It is possible that finished objects from Çukuriçi Höyük may have been bartered for tin with Troy, since the excavations at Troy do not indicate substantial metal production during EBA 1, though the types and metal composition of metal objects at Troy overlap with those at Çukuriçi Höyük. Troy appears to have largely benefitted from the control of tin and trade of other goods during EBA 2, whereas the settlement of Çukuriçi Höyük was abandoned at that time.

IV.3. Contexts of Metal Production in Western Anatolia during EBA 1

Following the on-site discussion of architecture as a code of kinship at Çukuriçi Höyük is providing additional indications that Çukuriçi Höyük may have been organized according to patrilineal descent lines. This next section looks in particular at the on-site and regional evidence of metalworking for two reasons: first, because Çukuriçi Höyük has already been interpreted as the EBA 1 metal production centre without much further contextualization, and

⁹²³ Horejs et al. 2017.

⁹²⁴ Emra et al. 2020.

⁹²⁵ Horejs – Mehofer 2015.



Fig. 20 The EBA 1 assemblage of moulds, clay tuyères, crucibles, and arsenical copper items from Çukuriçi Höyük (Mehofer 2014, fig. 1)

second because metalworking has been postulated to be the main driver towards centralized, chiefdom social organization in the Aegean. But to fully understand metalworking at Çukuriçi Höyük, the chapter starts with the most common archaeological model for interpreting craft activities developed by Cathy Lynne Costin.⁹²⁶ Based on the evidence from EBA 1 western Anatolia combined with socio-cultural anthropological insights, I propose some changes to the contextualization of crafts embedded into the Domestic Mode of Production. Within what Costin has initially identified as *independent specialists* embedded into the DMP, I propose distinguishing two further types of craft specialization: *generalized craft integration*, as seen from metalworking at EBA 1 Çukuriçi Höyük, and *restricted craft integration*, as seen from metalworking at other EBA 1 regional sites in western Anatolia.

The most commonly used distinction between specialists in prehistory is the differentiation between *attached* and *independent* specialists.⁹²⁷ According to Costin, attached specialists usually exist in complex societies, working full-time and producing specialized goods for the elite. By contrast, simple societies without elites integrate independent specialists, who work part-time, producing utilitarian goods for wider distribution. Costin⁹²⁸ argues that specialization is not an absolute state but a relative one, which can only be understood through a comparative approach. By analysing four parameters within the archaeological record – context, concentration, scale, and the intensity of production – it is possible to understand how production is organized (see Tab. 9). Her model has already been scrutinized at length by Christopher Britsch in his recent study of Neolithic and Bronze Age textile technologies in

⁹²⁶ Costin 1991.

⁹²⁷ Costin 1991. For ways of analysing 'specialist' production on a site-based and regional scale, based on ethnographic and archaeological cases, see Costin 1991. For a recent critique of the latter, see Britsch 2018, 35–40.

⁹²⁸ Costin 1991.

	Independent specialists	Attached specialists
Context	Production associated with domestic architecture	Production within a specialist workshop associated with elite markers (seals, stamps)
Concentration	<i>Dispersed production</i> Production for local consumption – the same type of craft identified in each community	<i>Nucleated production</i> Production for regional consumption – artisans limited to a particular site within a region
Scale	Family production units	Workshops of unrelated individuals
Intensity of production	Part-time specialists	Full-time specialists

Tab. 9 Archaeological classification of craft specialization (after Earle 1989; Costin 1991)

Aegean-Anatolian World.⁹²⁹ He showed that Costin's model assumes the *Pompeii Premise*⁹³⁰ type of archaeological record, a natural path from part-time to full-time specialists, and a lack of advice on how to count and measure the archaeological remains of craft specialization.⁹³¹

By contrast, within the anthropological literature, a primary distinction concerning crafts within semi-sedentary, non-state societies is between i) *domestic crafts*, a concept that refers to part-time specialists, which includes both genders (e.g. female part-time weavers) and ii) *local/regional specialists*, which refers to seemingly full-time specialists (e.g. male wood-carvers, tanners). The two groups of specialists – producers of *domestic crafts* and *local/regional specialists* – can coreside with non-specialist households, or may coreside with each other in specialists' villages. In both cases, these constellations are not elite-dependent, but organized from below. The specialized villages are also known as *handwork centres*,⁹³² with reference to Dār al-Makārimah, an 'Asīr village (southwestern Saudi Arabia) and a centre of carpentry work, which supplied joinery products to the upland 'Asīr villages. Dwellers and carpentry specialists at Dār al-Makārimah were originally refugees from Zaidi groups. They had established a new village 40 years prior to ethnographic observation.⁹³³ For centuries, such carpenter-specialists from a few nucleated settlements had represented a minority, low-status group within the wider region.⁹³⁴ They worked on commission either based in their own settlement (for clients nearby) or along seasonal routes of regional migration (for clients in the wider region).

These insights may be productively used for an analysis of the archaeological record in question. In coastal western Anatolia and the eastern Aegean islands, all of the excavated sites indicate some sort of metalworking. Two metalworking workshops were identified at Poliochni and a metalworking quarter at Thermi. At Poliochni, the two workshops were attached to houses, but the metalworking workshops differed in the 'exotica' – the imported Aegean objects found there –, which indicated the higher status of metalworking families.⁹³⁵ A piece of indirect evidence for copper working within a domestic context was attested at Troy, at Emporio in house VI, and at Heraion linked to a domestic space. At Liman Tepe, continuous

⁹²⁹ Britsch 2018, 35–40.

⁹³⁰ *Pompeii premise*: 'a methodological tenet of the New Archaeology, is that one can analyse house-floor assemblages as if they were systemic inventories – unmodified by formation processes', instead of acknowledging that 'artifacts can come into floor contact through many processes and that a variety of cultural formation processes can cause de facto refuse assemblages to be 'depleted' relative to systematic inventories' (Schiffer 1985, 38).

⁹³¹ Britsch 2018, 35–40.

⁹³² Dostal 1983a, 51.

⁹³³ Dostal 1983a, 55.

⁹³⁴ Gingrich 2015a.

⁹³⁵ Kouka 2002.

metalworking was recorded within house 2, and at Bakla Tepe metalworking was also linked to a domestic setting.⁹³⁶ At Çukuriçi Höyük, metalworking was not restricted to a particular house or quarter, but was found within a domestic context. In none of these cases was metalworking associated with elite domestic structures, but was instead found within the living quarters. At Çukuriçi Höyük, a fragment of what was possibly a Cycladic decorative vessel was found in room 43, which was also involved in metal production. However, the interpretation that this household was of a higher economic status cannot be confirmed based on a single find.

In comparison to widely attested metalworking at coastal sites, the sites located in the hinterland of western Anatolia lack evidence of metal production. Demircihöyük was located close to metal sources, but does not show any signs of metalworking, although a small number of metal pins were recovered from the settlement. Metalworking at this site was either conducted outside the settlement or objects were acquired through the exchange of ores, controlled by the dwellers at Demircihöyük. Küllüoba and Karataş, two chiefly centres in the hinterland of western Anatolia, also lack evidence of smelting and metalworking within the two settlements. Metal objects at these sites were relatively scarce and were not hoarded within the central chiefly complexes. Therefore, based on the archaeological evidence for metal production, it is possible to distinguish between the western Anatolian hinterland sites where metalworking was used but not produced, and those coastal sites where it was evidently produced and used within the same village settlement.

In the case of Çukuriçi Höyük, metalworking took place within houses, and metal production was associated with other household-based activities such as textile production, food storage, preparation, and consumption. Regarding architecture and the associated finds at the site, none of the excavated buildings could be referred to as elite structures. House construction, the layout, and the organization of interior spaces were largely homogeneous. Independent production for local but most likely also regional use could therefore be the case at Çukuriçi Höyük. The lack of administrative artefacts such as seals and stamps argues against any intended production for elite centres. It is therefore reasonable to argue that in addition to its mixed subsistence *cum* exchange-oriented economy, Çukuriçi Höyük also served as a regional craft specialists' centre for copper production.⁹³⁷ For the distribution of metalworking in an EBA 1 western Anatolian settlement (see Fig. 21).

However, three Near Eastern balance weights were also identified at the site. This testifies to the adoption of Near Eastern weighing techniques at the beginning of the 3rd millennium in western Anatolia.⁹³⁸ These weights therefore indicate long-distance trade between Çukuriçi Höyük and the early urban centres, facilitated by Mesopotamian merchants who traded with the peripheries for gold and silver – a proto-currency by the middle of the 3rd millennium BC in Mesopotamia.⁹³⁹ It can thus be concluded that Çukuriçi Höyük simultaneously produced metals for local consumption, for regional gift or barter exchange, and for long-distance commodity exchange.⁹⁴⁰

Despite the different organization of metalworking at Poliochni and Çukuriçi Höyük, there is a striking similarity between them regarding the existence of long-distance trade within the early Near Eastern states. A set of oblong dark stone weights, close parallels in material, shape and weight to Near Eastern ones, was found at each site.⁹⁴¹ Weighing practices do not seem to

⁹³⁶ Erkanal 2011.

⁹³⁷ Horejs – Mehofer 2015; Mehofer 2016.

⁹³⁸ Horejs 2009; Horejs 2016b; Rahmstorf 2016.

⁹³⁹ Broodbank 2013.

⁹⁴⁰ Here, the terms commodity and production for exchange do not follow Marx's understanding of commodity but Mauss', in which a commodity is understood through transactions and relations between individuals rather than production for the market.

⁹⁴¹ Rahmstorf 2016.



Fig. 21 Distribution of metalworking in EBA 1 western Anatolian settlements
(OeAI-OeAW, M. Börner, C. Schwall)

have been simply adopted, but were also adapted to local needs, since the earliest type of spool weights that were more common in EBA 2 were found within the EBA 1 layers at Çukuriçi Höyük and Poliochni. This implies that during EBA 1, metals were circulated within the Aegean basin not only as gifts or barter but also as commodity exchange items, measured by means of external supra-local criteria, in the absence of money. Although metalworking was attested in several EBA 1 excavated sites in western Anatolia, weights were only identified at two of them: Çukuriçi Höyük, and Poliochni.⁹⁴²

⁹⁴² For further discussion of weighing and long-distance exchange between western Anatolia and the Near East, see Chapter VII.

The Scale of Metal Production

If workshop size and the number of producers are correlated, then metal production across western Anatolian sites was produced within small groups. The so-called 'smithing workshops' at Thermi, Poliochni, and Emporio did not differ in size from other domestic structures, and were not separated from the living quarters but attached to other houses. These workshops were unlikely to have been run by unrelated individuals, and producers were certainly not dependent on wage labour. Metalworking was not located on the fringes of the settlement, as is often reported from ethnographic cases of African ironsmiths. In the latter case, smelting activities were located at some distance from villages for health reasons, but also to keep women and sorcerers away. Such an arrangement is not evident from the archaeological record of EBA 1 in western Anatolia. Copper smelting and working sites are located within villages, which suggests that although copper working may have been, but was not necessarily, gendered,⁹⁴³ producers were less concerned about isolating these activities from domestic spaces used by women, men, and children. This implies that metalworking cut across gender and age and took place within multi-gendered and multi-generational households at the dawn of 3rd millennium BC in the Aegean basin. Small family production units operating adjacent to their domestic space was the case for settlements such as Poliochni and Çukuriçi Höyük, as well as other regional sites where arsenic copper working took place.

Larger ovens, a feature that has been archaeologically recorded in a metallurgical workshop at the EBA site of Arisman in west central Iran,⁹⁴⁴ are missing within the assemblage in western Anatolia. An exceptionally large oven specialized for metal smelting has not been found at either Poliochni, where metalworking was limited to two workshops, nor at Çukuriçi Höyük, where metalworking was dispersed. Therefore, large-scale production cannot be proven in western Anatolia, as the metal smelting was conducted in ovens of a similar size to domestic hearths.

The Intensity of Metal Production

The intensity of metal production is entirely absent from the literature on metalworking in western Anatolia. Kouka refers to metalworkers as specialists at Poliochni and Thermi,⁹⁴⁵ who were not only smiths but also rich traders involved in supra-regional exchange. The question of whether specialists at Poliochni were detached from the production of staple goods by relying on the agricultural production of others has not been addressed. By contrast, at Çukuriçi Höyük cooking pots and small finds such as spindle whorls and awls indicating textile production were located within the same space as the 'metallurgical workshops'. Large-scale deforestation, possibly linked to the production of charcoal, was not attested at Çukuriçi Höyük.⁹⁴⁶ For these reasons, metalworking at Çukuriçi Höyük is understood to have been a part-time occupation, performed in less busy times during the agricultural cycle. This does not imply that everyone at the site was involved in metal production. A division of labour within the household certainly existed, but cannot be confirmed with the material record at hand. The small metal-producing groups overlapped with the commensality 'that consecrates group as a group'.⁹⁴⁷ The households at Çukuriçi Höyük were production and consumption units, a household type that is particular to groups relying on the DMP.

⁹⁴³ For a challenge to traditional assumptions of gendered labour in archaeology, see a recent volume edited by Kelly – Arden 2016.

⁹⁴⁴ Boscher 2016.

⁹⁴⁵ Kouka 2002; Kouka 2014; Kouka 2016a.

⁹⁴⁶ Stock et al. 2015.

⁹⁴⁷ Sahlins 1972, 94.

Metalworking and the Domestic Mode of Production

The DMP, as envisioned by Sahlins, refers to Neolithic societies in which the production and consumption of food and other material goods are not separated and take place simultaneously within domestic units. They are not growth-oriented but aim at meeting their needs,⁹⁴⁸ which does not necessarily exclude small-scale competition for prestige and honour. Households of the DMP type may accommodate specialists, but these can only be part-time rather than full-time specialists, which makes the households ostensibly self-sufficient. Specialists of the DMP type may be potters, stone knappers or butchers, but they would also engage in hunting or farming to meet their subsistence needs. For Sahlins, a ‘small labour force differentiated by sex, simple technology, and finite production objectives’ is crucial for the DMP, which is an ‘anti-surplus system’⁹⁴⁹ that can only be sustained with Neolithic or Stone Age technology.

However, the assemblage at Çukuriçi Höyük poses a problem. On the one hand, the material evidence at this site speaks for a DMP metal production context. On the other hand, Sahlins argued that the DMP can only be sustained with Stone Age technology, since metal tools would increase productivity beyond a household’s needs.⁹⁵⁰ The role of metals has puzzled anthropologists and archaeologists alike, and the notion of social complexity is commonly perceived as being inherently linked with the emergence of new technology, especially metals, which could contribute to the generation of greater agricultural surpluses. At the end of the 19th century, Morgan associated copper and bronze smelting with the middle, and iron working with the upper stages of barbarism. He referred to these two ‘stages’ as still being based on ‘gentile organization’ or kinship rather than the territorial or political organization associated with civilization.⁹⁵¹ Inspired by the work of Morgan, Childe assessed the role of metals from an archaeological perspective and argued that:

‘The first smiths were perhaps the first independent craftsmen. Any hunter or farmer could make a flint knife or arrow-head and grind out a stone axe-head in his spare time. His wife could stitch together robes of skins, even spin and weave, and mould and fire clay pots. The art of the smith was so complicated that prolonged apprenticeship was required. His labour was so long and exacting that it could not be performed just in odd moments of leisure; it was essentially a fulltime job ... In a Bronze Age village we often find one hut, but never more, that was obviously the smithy.’⁹⁵²

In addition to Bronze Age smiths being full-time specialists, Childe also argued that they were also the first to abandon kinship relations. The ‘emancipation from kinship ties’⁹⁵³ was a consequence of itinerant smiths travelling from village to village, producing metals in exchange for food.

In EBA western Anatolia, metalworking has commonly been seen as the main driver of social change and increasing social complexity, leading towards the establishment of the first chiefdoms in the region.⁹⁵⁴ This idea has remained unchanged since Childe, who cemented the perception of metalworking as a full-time craft. According to Renfrew, the emergence of the redistributive economy of wheat, grapes, and wine, the so-called *Mediterranean polyculture* headed by a chief, was the economic basis for supporting the EBA full-time metallurgist within the Aegean basin.⁹⁵⁵ However, follow-up studies have rejected the existence of a redis-

⁹⁴⁸ Sahlins 1972.

⁹⁴⁹ Sahlins 1972, 82.

⁹⁵⁰ Sahlins 1972, 17.

⁹⁵¹ Morgan 1877.

⁹⁵² Childe 1930, 4–5.

⁹⁵³ Childe 1950, 7.

⁹⁵⁴ Renfrew 1972; Şahoğlu 2005; Şahoğlu 2016.

⁹⁵⁵ Renfrew 1972.

tributive economy of these three staple crops before the 2nd millennium BC within the northern Aegean.⁹⁵⁶ Instead, proponents of the chiefdom social organization model for EBA 1 western Anatolia have returned to metal production and long-distance exchange as the main triggers for the socio-political integration of numerous village societies since Earle showed that a distributive economy was not necessary for the emergence of chiefdoms.⁹⁵⁷

The assemblage in EBA 1 western Anatolia indicates that metal tools and weapons were relatively scarce in comparison to stone tools (let alone those made from bones and wood), indicating little change in agricultural production.⁹⁵⁸ The metal assemblage is comprised of metal pins, fishing hooks, a rather limited number of daggers and stone axes, whereas sickles, hoes, and other agricultural implements are mostly absent from the record. The latter tools continued to be made from obsidian or flint, and 'there is no evidence for a declining obsidian industry in the Early Bronze Age despite obviously metal resources'⁹⁵⁹ at Çukuriçi Höyük. It is apparent that, as regards the technology used in subsistence activities, metal tools had not replaced stone and bone tools during EBA 1. As a result of the widespread scarcity of metal tools in EBA 1 western Anatolia, people relied on Stone Age rather than Bronze Age technology.

IV.4. Metalworkers: Part-Time or Full-Time Specialists?

The last section of this chapter looks in particular at the intensity of metalworking, specifically with regard to ethnographic or archaeological support for full-time or part-time metalworking specialists. As I will show, there is no need to postulate itinerant smiths based on a single metalworking unit/household or workshop per site. Based on insights from Walter Dostal,⁹⁶⁰ it can be shown that metalworking, carpentry, or basket production can be integrated differently into regional village settlements, without full-time specialization. As this chapter shows, metalworking at Çukuriçi Höyük was indeed a part-time occupation, which is also applicable to other regional EBA 1 sites. Metalworking in this region was not necessarily cut off from local kinship ties. Instead, as becomes evident from Çukuriçi Höyük, metalworking reinforced kinship ties between houses. By contrast, metalworking possibly disrupted social ties between metalworking and non-metalworking households at other contemporaneous sites, hinting at the possibility of metalworking as part of a chiefdom's socio-political integration with conical clan descent patterns.

Çukuriçi Höyük being a regional production centre, as described by archaeologists, may trigger scholarly associations with heightened prestige, hence suggesting possible interpretations about some kind of elevated status in the region, or even of metalworkers' or smiths' superiority in comparison to other non-metalworking sites or non-metalworking workshops. On the contrary, this chapter shows that metalworkers may not have exclusively had a special privileged status, such as metalworker-chiefs, but that they could also be relegated to marginal and/or inferior social status.⁹⁶¹ This is very likely for metalworkers at Çukuriçi Höyük, whose 'fame' for arsenical copper production within this production centre did not afford them undisturbed local social reproduction here, but rather resulted in them being uprooted at the end of the EBA 1 period. Regarding the issue of gender, the chapter concludes that we cannot postulate that metalworking was exclusively a male craft at Çukuriçi Höyük since it took place within houses and homes, without an obvious gendered pattern, at the same hearths used for cooking. Regarding kinship, metalworking at Çukuriçi Höyük did not disrupt

⁹⁵⁶ Hansen 1988; Alram-Stern 2004; Halstead 2011; Hansen 2014.

⁹⁵⁷ Earle 2002.

⁹⁵⁸ Copper and bronze tools, however, are not particularly useful for agricultural work.

⁹⁵⁹ Knitter et al. 2012, 362.

⁹⁶⁰ Dostal 1983a.

⁹⁶¹ Dostal 1983a, 50.

kinship ties within and between households but reinforced them. Çukuriçi Höyük's households depended on arsenical copper production through sharing materials and knowledge between houses but also transmitting knowledge of metalworking within houses until the settlement was abandoned.

Ethnographic accounts of metalworking societies have shown a strong correlation between metalworking and descent groups. Smiths are commonly known for their superior technical and supernatural skills.⁹⁶² They can be highly appreciated but at the same time feared, especially by the chief, if the local social organization is centralized.⁹⁶³ In the tribal contexts of western and southern Asian contemporary ethnography, smiths may also be relegated to marginal and/or inferior social status.⁹⁶⁴ Smiths can be differently integrated into local communities, and therefore metalworking cannot be *a priori* associated with any particular model of social organization.⁹⁶⁵ Rowlands⁹⁶⁶ distinguished between two types of metalworking specialization: i) individual specialists, and ii) group specialists. While *individual smiths* could be integrated into smaller or larger polities and *group specialists* may be found in different interdependent villages, both types could be sustained by a subsistence economy. In the case of group specialists, metalworking groups in each of the interdependent villages may produce different type of tools or weapons, forming an economic unit through the exchange. Rowlands noted that

‘These are examples where specialization encourages the development of occupation groups, allowing higher production with greater economic security without being accompanied by major changes in settlement size or socio-political organization.’⁹⁶⁷

Other ethnographic accounts from African metallurgical societies also emphasize seasonality and further support the existence of both politically centralized and decentralized metalworking societies. In unstratified societies metalworkers are usually part-time specialists operating on a seasonal basis.⁹⁶⁸ They cultivate fields in the summer months alongside metalworking in the winter for their own use, on demand, and for exchange.⁹⁶⁹ These part-time specialists are usually members of a specific clan and, as manpower is scarce, the smiths demand labour from their customers (e.g. blowing the bellows). They may reside in the same village and fission⁹⁷⁰ when the competition is too high.⁹⁷¹ In stratified societies metalworkers are usually full-time specialists. However, they are often occupation-endogamous, i.e. restricted to marrying the son or daughter of another blacksmith rather than a farmer. Full-time specialists also maintain a strong gendered division of labour, in which women are potters and men are metallurgists.⁹⁷²

⁹⁶² The association between metalworking and magic might be perceived as a potential cultural universal among metalworking societies. Blacksmiths have inspired a number of folk songs, tales, and other orally transmitted culture. A recent linguistic study even claims that ‘the Smith and the Devil’ is one of the oldest Indo-European folk tales, transmitted through the dispersal of the Indo-European language into Europe (da Silva – Tehrani 2016). An association with magic has been widely documented in the ethnographic record, as blacksmiths can turn stone into metal.

⁹⁶³ Rowlands 1971; Richards 1981.

⁹⁶⁴ Dostal 1983a, 50.

⁹⁶⁵ Rowlands 1971.

⁹⁶⁶ Rowlands 1971.

⁹⁶⁷ Rowlands 1971, 219. The same type of village specialization could be compared with the case of the Baruya, who specialized in salt production. Salt ‘money’ served as a medium of exchange between different groups. Importantly, the seasonal specialized production of salt from the local salt sites did not result in political centralization, despite differences in salt production expertise between Baruya men (Godelier 1972, 1991).

⁹⁶⁸ Childs – Killick 1993.

⁹⁶⁹ Rowlands 1971; Childs – Killick 1993.

⁹⁷⁰ Here, fission does not refer to seasonal fission-fusion societies (e.g. Eskimo) but the permanent breakaway of a segment of a village, which then establishes a new residential group or may peacefully or forcefully join another one.

⁹⁷¹ Childs – Killick 1993.

⁹⁷² Childs – Killick 1993.

The relationship between a smith and their customer is often one of dependency. In many metalworking societies, a smith is in charge of the metal production but the customer supplies raw materials, labour or fuel.⁹⁷³ Kuku blacksmiths barter their metal tools for high-quality food such as chicken, goat, cowpea soup, peanut butter, millet or sorghum flour.⁹⁷⁴ As they do not cultivate their own gardens, but the wealth in Kuku society is measured in agricultural goods, they are perceived as lazy.⁹⁷⁵

Regarding subsistence practices at Çukuriçi Höyük,⁹⁷⁶ the EBA 1 dwellers mainly relied on domesticated plants and animals. Animal herding was small-scale. Domestic animals were kept off the mound, near the site, all year round. Sheep and goats were milked or slaughtered, primarily for meat rather than for secondary products (e.g. wool). Plant cultivation remained human labour-intensive: lentils, which require more human labour than cereals,⁹⁷⁷ are better represented in the record. Ploughing has not been confirmed by the zooarchaeological analysis. The cattle bones at Çukuriçi Höyük do not display traction pathologies which could indicate the exploitation of animal labour. The diet of domestic animals and plants was supplemented by hunting large and small game, fish, and a variety of maritime shellfish. Overall, it has been demonstrated that subsistence practices at Çukuriçi Höyük indicate mixed farming,⁹⁷⁸ in which human labour still played a significant role.

If we combine subsistence practices, the complex material record of the whole *chaîne opératoire* (which includes metal extraction, melting, smelting, alloying, forming, and repairing finished objects)⁹⁷⁹ at Çukuriçi Höyük and ethnographic accounts of metalworking societies, it is possible to draw some conclusions about crafts organization at Çukuriçi Höyük as well as the wider regional setting. In comparison to other sites on the eastern Aegean islands and in western Anatolia, where a few local specialists were identified per settlement, metalworking at Çukuriçi Höyük was a vital village-wide skill, of the handwork centre⁹⁸⁰ type. Metalworking knowledge, access to raw materials and metal objects were widely shared between the households at Çukuriçi Höyük, and not hoarded or limited to a particular room or dwelling.

In other cases, the sites belonging to the eastern Aegean and western Anatolian 'cultural koine', metal production was instead limited to a specific domestic group and not widely shared across the settlement. A lack of large-scale workshops indicating production for elites does not support the existence of attached specialists. Also, at these sites, bronze or arsenic copper tools had not replaced stone and bone tools. As shown through the ethnographic cases, a few specialists within a village may not necessarily be full-time specialists. Therefore, full-time specialization of a single household involved in metalworking at EBA 1 western Anatolian sites other than Çukuriçi Höyük does not necessarily imply a full-time specialization here. Ivanova, who re-examined the assemblage of Troy, pointed out that rooms there were similar in size and construction, and were also very similar in internal organization and domestic activities, indicating an 'egalitarian' social organization at Troy I.⁹⁸¹ Ivanova does not refer to a broken fragment of a spear or dagger mould found within a house wall at Troy I,⁹⁸² since the

⁹⁷³ Rowlands 1971; Childs – Killick 1993.

⁹⁷⁴ Interview with D. Jale 2002 cited in Poggo 2006.

⁹⁷⁵ Poggo 2006.

⁹⁷⁶ For a detailed discussion of subsistence practices at Çukuriçi Höyük, see Chapter III.

⁹⁷⁷ Halstead 1987.

⁹⁷⁸ Halstead 2011.

⁹⁷⁹ Mehofer 2015.

⁹⁸⁰ Dostal 1983a, 51.

⁹⁸¹ Ivanova 2013; Ivanova 2016.

⁹⁸² Blegen et al. 1950, 38, 150.

mould was not recovered from the location of its active position.⁹⁸³ The example from Troy further supports the interpretation that a small group of specialists within a site can be integrated into the DMP model. This evidence, then, requires a certain modification of Costin's (attached vs. independent specialists) and Sahlins's (DMP) models regarding craft specialization.

Scholars have previously questioned the necessary full-time specialization of smiths, proposed by Gordon Childe,⁹⁸⁴ and inherently technological explanations of prehistoric metalworkers, without recognition of the magic and ritual often linked with metalworking.⁹⁸⁵ Sahlins's argument that the DMP may only be sustained by a society based on Stone Age technology may be a good explanation of why the analysis of the domestic economy within metalworking societies is usually centred on elites. In the literature on the earliest chiefdoms within western Anatolia⁹⁸⁶ and also central Europe and prehistoric Denmark,⁹⁸⁷ researchers commonly agree that the elite political institutions controlled either craft production or long-distance exchange, which inevitably led to increasing social complexity. Unlike the 'Stone Age chiefdoms' of Polynesia, relying on distributive economies of staple goods, these authors commonly argue that societies in prehistoric Europe were mobilized and politically centralized through the production and restricted accumulation of prestige goods, especially metals, decorative pottery, or other exotica. Exchange of exotica was controlled by the political elite, which turned it into wealth. Yet, elites were usually not involved in the production of particular exotica, and therefore the socio-political models of these prehistoric societies are largely built top-down, from the elite perspective rather than from the perspective of producers.⁹⁸⁸ As I have shown in this chapter, Bronze Age technology did not replace but rather complemented Stone Age technology during EBA 1 in coastal western Anatolia, and accordingly, a large-scale agricultural surplus is not visible from the record considered here.

In contrast to the chiefdoms in prehistoric Denmark, Islamic and medieval examples in Arabia (e.g. the Fertile Crescent, Yemen, and Hijaz) showcase a different integration of craftspeople into regional economies. In the latter case, metalworking (like woodcarving) was embedded in rural tribal economies. Crafting skills were transmitted through the patrilineal line of descent over generations, which resulted in the emergence of craftspeople's⁹⁸⁹ occupational groups within a predominantly farming community.⁹⁹⁰ Apart from two regional handwork centres, one specialized in woodworking and the other in metalworking, a regional village integration of sedentary, part-time metalworkers was far from being homogeneous (see Figs. 22–23). Whereas woodcarvers were often itinerant and worked on demand, outside the handwork centre, metalworkers were integrated in various ways into semi-sedentary villages, which resembled the differentiated regional integration of metalworkers in western Anatolia during the Early Bronze Age.

The material record from the eastern Aegean islands and western Anatolia disproves the notion of full-time itinerant smiths, and points towards two different kinds of smiths' integration into the DMP, since metal producers were not detached from metal consumption

⁹⁸³ The archaeological *terminus technicus* of 'active position' or 'in situ' refers to objects 'found on the same spot where they were originally used' (Pfälzner 2015, 37).

⁹⁸⁴ Rowlands 1971; Budd – Taylor 1995; Goody 2012, 45.

⁹⁸⁵ Budd – Taylor 1995; Chirikuer 2015.

⁹⁸⁶ Renfrew 1972; Pullen 1985.

⁹⁸⁷ Earle 1987; Earle 1998b; Earle 2002.

⁹⁸⁸ Whereas the elite production is widely attested in the following EBA phase (EBA 2), when production of tin bronzes intensified and overlapped with the establishment of large urban centres in the region, starting around 2600 BC (Şahoğlu 2005; Şahoğlu 2008), the primary focus of this discussion is centred around the EBA 1 period in western Anatolia.

⁹⁸⁹ In this case the metalworking and woodworking craftspeople were exclusively male.

⁹⁹⁰ Dostal 1983a. Within these areas, only minting coins and making specialized weapons were based on centralized production, controlled by urban elites.

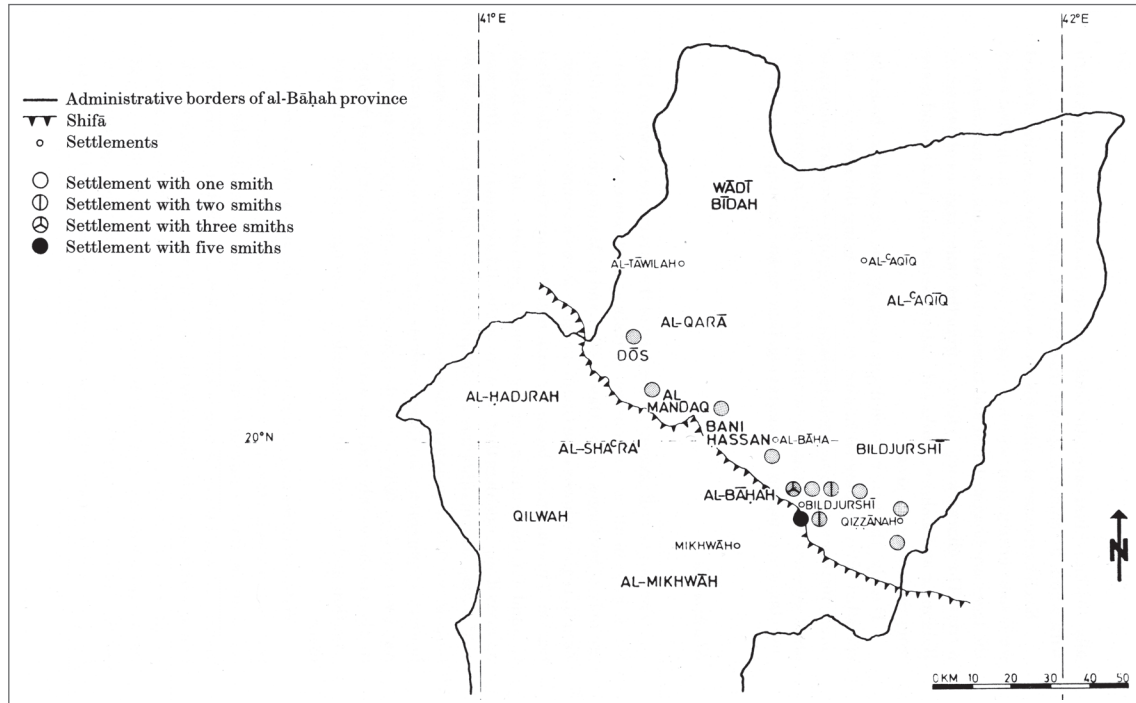


Fig. 22 Regional distribution of blacksmiths in 'Asīr (Dostal 1983a, map 3)

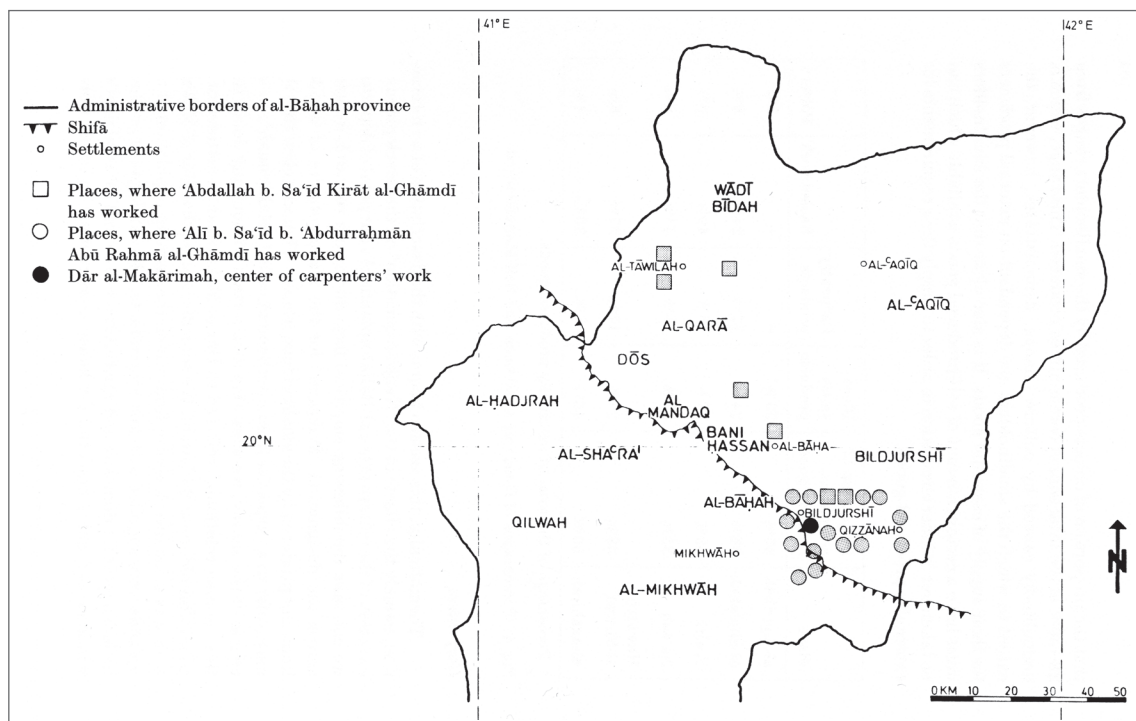


Fig. 23 Working places of two carpenters in 'Asīr (Dostal 1983a, map 2)

and trading. Considering the ethnographic record, a 'minority' group within a village may specialize in metalworking but at the same time, these specialists may not be detached from subsistence production (such as human labour-intensive farming, hunting, or animal herding). Thus, metalworking, even if confined to a particular household within a village, or a

small number of them, may not necessarily be a full-time occupation.⁹⁹¹ Instead, in this case a metalworker is a part-time specialist, working metals on a seasonal basis during less busy agricultural times, producing for their own domestic group, the local village and possibly on demand.⁹⁹² The metalworking expertise may be passed on through descent lines but also shared with those who ask, through apprenticeship. On a village level, I refer to this type of integration as *restricted craft integration* (see Tab. 10) which does not downplay the smiths' abilities, whether technological, magical or ritual, but importantly recognizes that these 'specialized households' were equally involved in subsistence production. This type of village specialization applies in the eastern Aegean islands and in some sites in western Anatolia.

I draw the second type of specialists' integration into a village from the material record at Çukuriçi Höyük. In this case, each household engaged in metalworking for use but also for exchange, as indicated by the moulds for rod ingots. This, however, could imply that some households were only the traders whereas others were involved in the raw material procurement, the melting and smelting procedures, or performed the final work on tools. Different steps of complex metalworking technology – melting, smelting, alloying, forming, and repairing finished objects⁹⁹³ – for the production of standardized alloys of arsenical copper was widely shared across the community and transmitted through the generations. I interpret the specialization on a village level as a *generalized craft integration* (see Tab. 10). This type of village specialist integration has been documented among pottery makers in southern Mexico, Barundi potting communities in eastern Africa,⁹⁹⁴ Baruya salt producers,⁹⁹⁵ and a blacksmith village or handwork centre in 'Asīr.⁹⁹⁶ In those cases, most of the households within a community were involved in *generalized craft integration* for two reasons: because it was materially possible (local sources of clay, obsidian, and metal ores), but also because every household could then acquire desired objects from external sources through trade. *Generalized craft integration* played an important role in regional economies – pots, salt, and metal tools from the ethnographic cases of *generalized craft integration* in fact served as the equivalent of primitive money, and were used for bartering goods on a regional scale. Importantly, specialists embedded in *generalized craft integration* worked the land and produced for their own household, but also for local and regional consumption. In this case production for use and production for exchange should not be treated as binary opposites, since:

‘The households of primitive communities are not usually self-sufficient, producing all they need and needing all they produce. Certainly, there is exchange. Even aside from the presents given and received under inescapable social obligations, the people may work for a frankly utilitarian trade, thus indirectly getting what they need.’⁹⁹⁷

Linked to subsistence practice, the assemblage from Çukuriçi Höyük differs from other sites in another important way. Whereas at other western Anatolian hinterland sites cattle and sheep had gained in importance, dwellers at Çukuriçi Höyük largely relied on goats, followed by sheep and cattle for subsistence. Since cattle, wool, and metals are well-known stores of value, these three goods (among others) may have emerged as primitive money during EBA 1 in western Anatolia, linking the villages of *generalized craft integration* with other sedentary or mobile cattle breeders.

⁹⁹¹ For a different opinion, see Childe 1930; Renfrew 1972; Childe 2002; Şahoğlu 2005; Şahoğlu 2008.

⁹⁹² This holds true for pre-iron communities, but may not be applicable for societies with iron tools.

⁹⁹³ Mehofer 2015.

⁹⁹⁴ Meyer – Handzik 1916.

⁹⁹⁵ Godelier 1972; Godelier 1991. Goody also questioned the full-time specialization of early metallurgists, labelling the full-time specialization of metalworkers as ‘a red-herring in such an economy’ (Goody 2012, 44).

⁹⁹⁶ Dostal 1983a.

⁹⁹⁷ Sahlins 1972, 83.

Independent Specialists (as part of DMP)	
Restricted Craft Integration	Generalized Craft Integration
A few specialists per settlement	Craft as a village expertise
Production associated with domestic architecture	Production associated with domestic architecture
<i>Nucleated production</i> Production for local and regional consumption	<i>Dispersed production</i> Production for local and regional consumption
Family production units	Family production units
Part-time specialists	Part-time specialists

Tab. 10 Restricted and generalized craft integration as a part-time expertise

Chapter Summary and Conclusion

In the introduction to this chapter, I posed the question of whether a ‘periphery’ on the fringes of the Mediterranean basin was indeed a homogeneous unit. Previously, an east Aegean and western Anatolian EBA 1 ‘cultural koine’⁹⁹⁸ was inferred from enclosed sites, two-roomed houses, agglutinating settlement patterns, and connectivity between sites through the exchange of obsidian and metal during EBA 1. A shared *opus operatum* blurred the division between the ‘chiefly’ and ‘commoner’ houses in coastal western Anatolia during EBA 1, whereas the earliest chiefdoms can be traced in the hinterland. At a time when metals were gaining in importance but had not yet replaced stone and bone tools, the differentiation between settlements, especially in metalworking, appears evident on a regional scale. The proposed eastern Aegean and western Anatolian ‘cultural koine’ during EBA 1⁹⁹⁹ inferred from shared house architecture and connectivity between the sites therefore downplays significant differences between the sites’ socio-economic organization. This does not deny the possible validity of some koine for this region and period, but argues that such a notion only makes sense if, and as long as, it also integrates local and regional socio-political and economic diversity.

A multiplicity of houses competing for status does not appear to be applicable to the eastern Aegean and most parts of western Anatolia. The restricted integration of metalworkers in the eastern Aegean islands indicates a limited craft specialization that may have differentiated ‘specialized households’ from ‘non-specialized households’ on the basis of access to exotica. Within those settlements, it was not the case that a number of houses competed for status, as would be expected from a house society model. On the contrary, the possession of knowledge of metal smelting and possibly magic allowed a particular household to gain in ‘prestige’ and strengthen ties with people beyond the village. During EBA 1, this did not lead to a monopolization of power as these households were not detached from agricultural production, and metals were not hoarded within metalworking households. However, the absence of exotica in houses without metal production indicates possible intra-site social differentiation.

In turn, at Çukuriçi Höyük, the division between the metalworking and non-metalworking households is rather blurred, in a generalized integration of copper producers. However, the rather ‘egalitarian’ sharing of metalworking knowledge and households’ codependence on its production does not mean that internal inequalities within metalworking households – differences in possession of magic knowledge, artisan skills, age and sex differentiation, and hunting prestige – did not exist. Although a house society model may remain valid for other archaeological cases, in the case of Çukuriçi Höyük, I have shown that kinship-based organization

⁹⁹⁸ Kouka 2002.

⁹⁹⁹ Kouka 2002; Kouka 2016a.

of production, consumption, and residence played a more important role in organizing the everyday life of dwellers at this site than the transmission of titles and internal competition for status between houses. Household-based economies at Çukuriçi Höyük were simultaneously embedded into regional economies. Without these the dwellers at Çukuriçi Höyük would not have been able to reproduce themselves as a community, nor would they have been able to transmit houses, in which metalworking was kept alive alongside other household-based activities, from one generation to another.

Most of the features of civilization in the Near East, such as record keeping and writing, the wheel, and the plough, did not reach the periphery sites in western Anatolia during EBA 1. However, the imposition and adoption of Near Eastern weights in western Anatolia during EBA 1 speaks for fluid boundaries between the urban and the rural, written and oral, consumers and producers. At the dawn of the 'long 3rd millennium BC', metals, metrology, and merchants were able to cross these boundaries, but a long-distance exchange between the Levant and western Anatolia, which intensified during EBA 2, benefitted a chiefly few. At the turn of the EBA 2 period (2700 BC), when the elites at Troy, Poliochni, Liman Tepe and other flourishing trading posts in western Anatolia dwelled behind doubly enclosed compounds, the houses at Çukuriçi Höyük were left empty for millennia to come.

V. Ecology at Platia Magoula Zarkou by Comparison

‘Whether materially present in bricks and mortar or in remote locations, in ruined or destroyed forms or in evanescent memories, they encapsulate traces of lives previously lived and reveal how these are forged in the shadow of wider structures. A focus on houses as refracting such entanglements enables us to grasp the latter’s simultaneously temporal, spatial, personal, relational and political nature.’

Janet Carsten¹⁰⁰⁰

Introduction

Following my initial discussion on regional dynamics at the dawn of the Early Bronze Age in western Anatolia, this chapter provides a window into people’s dwelling perspectives on the other side of the Aegean basin, namely the western side of the Thessalian plain. Primarily anchored around EBA Platia Magoula Zarkou, this chapter discusses some preliminary differences regarding subsistence strategies and labour organization at the two sites, prior to a discussion of regional economies in Chapter VII. The overarching goal of this study is to understand local social organization on both shores of the Aegean basin from socio-cultural anthropology’s perspectives. Given that the sample for this comparison comprises both a hinterland and a coastal prehistoric site, since the beginning of this research, the ecological differences between Platia Magoula Zarkou and Çukuriçi Höyük have been contextualized as among key dissimilarities between the two. However, a thorough study of EBA dwellers and their relation to the surroundings of Platia Magoula Zarkou and Çukuriçi Höyük indicates that the contrast between the two is not as dichotomous as it seemed.

It has already been stated in the introduction and in Chapter II that in the course of our research, the dating for EBA layers at Platia Magoula Zarkou turned out to be from later periods than initially expected. Instead of dating to the EBA 1 period (i.e. between approximately 3000 and 2700 BC), which had been expected from the relative chronology inferred through ‘Bratislava bowls’ documented at the site, the ¹⁴C dates refuted such a hypothesis. Instead, the radiocarbon dating confirmed that EBA 2 layers at Platia Magoula Zarkou date to the mid-3rd millennium BC.¹⁰⁰¹ Although Çukuriçi Höyük and Platia Magoula Zarkou were not contemporaneous, which would be required for comparison *stricto sensu*, the last section of this chapter offers a somewhat ‘uncontrolled’ comparison (to paraphrase an ironic remark by Sahlins) between the two sites in terms of animal breeding strategies. This comparison is not limited to EBA 2 layers at Platia Magoula Zarkou and EBA 1 layers at Çukuriçi Höyük, but it opens up an initial discussion of trends in animal herding strategies in EBA 2 western Anatolia, that differ significantly from the evidence at EBA 2 Platia Magoula Zarkou. This limited evidence points towards a different pathway towards increasing social inequalities within the Thessalian plain and contemporaneous western Anatolia, also seen in the respective household organization.

In this chapter, I show that Platia Magoula Zarkou’s EBA 2 assemblage of animal breeding bears a close local and regional similarity to big man societies. For example, the majority of sheep at the site were kept alive quite long, which could be an important indicator (in the sense

¹⁰⁰⁰ Carsten 2018, 104–105.

¹⁰⁰¹ Weninger et al. 2022.

of necessary, but not yet sufficient evidence) for regional exchange and alliance building. Moreover, the enclosure system recorded at this site may also not have exclusively represented a division between the upper and lower town, but also exhibited similarities to Melanesian big man societies in their decentralized social organization, lacking any administrative mechanism, yet with well-attested enclosures.

Like dwellers at Çukuriçi Höyük, inhabitants at Platia Magoula Zarkou also did not reside in self-sufficient ecological and socio-economic local systems. These local systems were open and interactive, meaning they were also integrated into regional exchange networks. Residents at Platia Magoula Zarkou relied on importing chert and obsidian for reproduction. In exchange for these, dwellers at Platia Magoula Zarkou could exchange some of their local output in sheep, wool, and woollen items. Based on wider regional comparisons, the western Anatolian EBA 2 ‘cattle culture’ may even have been accompanied by ‘competitive sheep breeding’ in the Thessalian plain. Therefore, wealth on the hoof does not necessarily have to be limited to pigs, as documented ethnographically in Papua New Guinea, or to cattle, as seen from EBA 2 western Anatolia, but could also apply to sheep and caprines within a more or less sedentary, non-state constellation, as seen from EBA 2 Thessaly.

To highlight differences and similarities between modes of life at the dawn of the Bronze Age and, most importantly, to understand developments on the Thessalian plain, this chapter is divided into four parts. Firstly, the importance of changes in the landscape surrounding Platia Magoula Zarkou will be described diachronically, from the Middle Neolithic to the Early Bronze Age, along with changes in farming practices. Secondly, drawing from analyses of zooarchaeological and archaeobotanical remains, subsistence strategies will be discussed with reference to the ratio of domestic vs. wild animals and the ratio between species of domestic animals. Thirdly, as the dwellers at Platia Magoula Zarkou markedly favoured the consumption of sheep, this preference will use culling profiles¹⁰⁰² to compare the prehistoric context with ethnographic examples of sheep herding groups in 20th century western Asia. Finally, a stark difference between a preference for sheep at Platia Magoula Zarkou and goats at Çukuriçi Höyük will be discussed through cross-cultural comparison with regard to local ecological variation and local labour organization at each site. As I have already mentioned, the sets of data from Platia Magoula Zarkou and Çukuriçi Höyük compared here do not only highlight ecological differences between the two sites. Instead, in this chapter, I posit that differences in animal herding strategies can only be understood through a ‘holistic comparison’, including plant cultivation and craft activities within sedentary, non-state societies. Through such a holistic comparison, the chapter then highlights commonalities and differences in the organization of everyday lives on each shore of the Aegean basin at the dawn of the Early Bronze Age.

V.1. Every River has a Story

Before visiting Platia Magoula Zarkou together with my DOC-team colleague Constanze Moser in March 2017, I learned from the literature that the role of the Pineios River flowing next to the site has been heavily debated. For both the Neolithic and EBA periods alike, the role of the Pineios River was key to understanding the diachronic perspective of modes of production and people’s dwelling perspectives at Platia Magoula Zarkou. Uncovering layers of debates about floodplain vs. rain-fed horticulture, corresponding to conflicting interpretations of seasonal vs. permanent occupation in the Neolithic, then led me to discourses on the seemingly

¹⁰⁰² Culling profiles refers to the zooarchaeological statistical analysis of animal bones. Through culling profiles, it is possible to understand site-specific consumption strategies (e.g. age at slaughter, specialized production strategies).



Fig. 24 The locations of Platia Magoula Zarkou and regional contemporaneous sites (ERC Prehistoric Anatolia/OeAI)

crystallized picture of plough agriculture and the Secondary Products Revolution in a permanent settlement during the Bronze Age at Platia Magoula Zarkou. I followed the changing river's story to understand changes and similarities between Neolithic and Bronze Age occupation at the site. Without resolving disputed theories on Neolithic farming but leaving multiple options open to interpretation, the first section will show that EBA inhabitants could indeed have relied on secondary products in a permanent settlement. This argument will, in a later section, be supported through zooarchaeological data. This is the first and important difference between Platia Magoula Zarkou and Çukuriçi Höyük's respective modes of production, as ploughing was not attested at the latter site, which very likely was also reflected in their household economies.

Platia Magoula Zarkou is a Neolithic and Bronze Age *magoula*,¹⁰⁰³ located 30km west of the modern town of Larissa, on the Western Thessalian Plain (see Fig. 24). The site was excavated between 1979 and 1990 by Kostas Gallis and his team, with a principal interest in studying the Neolithic occupation at Platia Magoula Zarkou and the Late Neolithic cemetery located close to the mound.¹⁰⁰⁴ At present, the mound at Platia Magoula Zarkou is approx. 6–7m above the ground, with the Middle Neolithic layers below ground, and a thick layer of alluvium covering the surroundings of the mound.¹⁰⁰⁵ The settlement on the *magoula* does not

¹⁰⁰³ The term *magoula* in modern Greek refers to 'a cheek'. Within an archaeological context, it refers to an anthropogenic mound (e.g. *höyük*, *tepe* in Turkish, *magoula* in Greek). During my fieldwork in March 2017, I stayed in Larissa with the family of a friend. They were curious about my work and explained to me that in Thessaly, the word *magoula* can today also be used to refer to a villager or an ignorant, backward person (e.g. 'Vlachs from Magoula'). In Thessaly, Vlachs are an ethnic, Romanian-speaking nomadic group, moving between winter pastures in the Thessalian plain and summer pastures at Mount Gramoz in the Pindus range.

¹⁰⁰⁴ Gallis 1982.

¹⁰⁰⁵ Van Andel et al. 1995; Andreou et al. 1996.

extend beyond 2ha¹⁰⁰⁶ but an off-mound settlement, surrounding the *magoula*, was attested for the EBA. The final publication related to the excavation of the site is still in preparation. Nevertheless, studies of stratigraphy, finds, and geophysical prospection around the site have been carried out.¹⁰⁰⁷ This allows us to arrive at interpretations based on a large pool of data, including analyses of the built and unbuilt environment at the site. However, the main goal of this chapter is to understand the dwellers' relationship to the immediate surroundings of the *magoula* and the subsistence strategies they employed in the EBA.

Today, Platia Magoula Zarkou is located 1km north of the Pineios River. This river originates in the Pindus Mountains, flows through the Trikala and Thessalian plains, and empties into the Aegean Sea. Therefore, one of the advantages of this site was access to a fresh water supply. Another advantage was its proximity to the longest and largest river for transportation in the Thessalian plain. This important natural waterway connection linked the hinterland site with the Aegean coast 60km to the east. According to detailed soil analysis from the area around Platia Magoula Zarkou, dwellers at the site also benefitted from the seasonal flooding of the Pineios River during the Middle Neolithic, which renourished soils for cultivation each year.¹⁰⁰⁸

In March 2017, I had the opportunity to observe the role of the Pineios River today, as it flows in close proximity to the site as well as through the extensive Thessalian plain (see Fig. 25). Constanze and I drove from Larissa towards the west, on the EO Larissa Trikkalon highway, exploring the western end of the Thessalian plain, mostly covered with agricultural fields. Spinach-coloured wheat fields contrasted with bright pink orchards. Most of the fields that had been ploughed were now rested and ready to be sowed. A few (mainly cotton) fields were left untouched from the harvest. Some were irrigated with water pipes, but most were not.

The illusion of the plains as infinite lasted for about 25km, but then soon disappeared as we entered a narrower part of the plain. The lower Zarkos Mountains (the highest peak at 734m) limited the panorama on our right-hand side. The insular constellation of the Duvlatan Hills, stretching over 12km north–south, bordered the plains to our left. We crossed through the narrowest part of the Pineios valley since our journey began, which is only 2km wide at this point. Soon after, we left the highway at the Zarko exit and the narrow Pineios valley opened up again, although not as wide as hilly slopes run east–west on the northern side of the Thessalian plain. After a short drive along a dirt road, we reached the mound of Platia Magoula Zarkou, which can easily be spotted from afar. From the top of the *magoula*, it was possible to observe the extensive plains covered with fields and unworked mountain slopes. These merged into the dynamic landscape within which Platia Magoula Zarkou is located. South of the mound, a somewhat orderly line of trees diverted my attention. ‘Is this the river?’ I asked Constanze. ‘Yes, that’s Pineios.’

We descended the *magoula* along a dirt road towards the river, passing some modern agricultural equipment at the edge of the fields. We soon reached the trees along the Pineios. They bore tiny, bright green leaves. The water level seemed to have dropped significantly since the early spring. This was clearly visible from the dry alluvial soil on the bark of the trees, close to the river’s edge, indicating that the water level had been approximately 1.5–2m higher. On the river shore, fresh but cracked alluvium gave way to grass where the broken branches allowed. This gift for Thessalian farmers, which originates in the western Pindus Mountains, materialized in front of us in a muddy water running down the Pineios at a slow pace (see Fig. 26). Was this also the case in the Bronze Age?

¹⁰⁰⁶ Van Andel et al. 1995; Andreou et al. 1996.

¹⁰⁰⁷ This project was led by Eva Alram-Stern from the Institute for Oriental and European Archaeology of the Austrian Academy of Sciences. Constanze Moser, a member of this cooperative project and our DOC-team, studied the Early Bronze Age layers at the site.

¹⁰⁰⁸ Van Andel – Runnels 1995.



Fig. 25 The proximity of Platia Magoula Zarkou to the Zarkos Mountains (S. Cveček)



Fig. 26 The fluctuating water level of the Pineios River, observed in March 2017 (S. Cveček)

Middle Neolithic Floodplain/Rain-Fed Cultivation and Bronze Age Rain-Fed Agriculture at Platia Magoula Zarkou

My question has been posed before. Waterways, flooding, and access to water are staple topics for the discussion of subsistence strategies and the spread of Neolithic farming communities. In the 1980s, Sherratt¹⁰⁰⁹ proposed two different modes of subsistence for the prehistoric Old World: *floodplain cultivation* during the Neolithic and the Secondary Products Revolution,¹⁰¹⁰ including use of the plough, for the Late Chalcolithic and the Bronze Age periods. The *floodplain cultivation* model¹⁰¹¹ was developed based on evidence that all Early and Middle Neolithic sites were established close to water sources – on alluvial plains, beside lakes, along rivers, or close to springs. Sherratt proposed that prior to the 4th millennium BC, the cultivation of crops in the Old World consisted of horticulture in water-rich environments with high groundwater levels and seasonal flooding. Although he described it as horticulture, this form of cultivation was not labour-intensive. He assumed that garden-like conditions were naturally given,¹⁰¹² in which spring instead of winter sowing of domesticated plants was preferred to avoid flooding and waterlogging. Within this model, animal herding was exclusively practised for the production and consumption of its ‘primary’ product: meat.

For the Old World Chalcolithic and Bronze Age, Sherratt’s¹⁰¹³ *secondary product revolution* model largely shaped at least the next three decades of follow-up discussions about the production, consumption, and reproduction of farming societies in the Old World. This model argues for rain-fed cultivation and a reliance on animal power for cultivation. Following the invention of the plough in the 4th millennium BC, oxen were used for traction and ploughing, enabling the cultivation of larger fields, which led to production of surpluses beyond household needs, increasing competition between households, and finally, increasing social inequality. Apart from animal labour, other secondary animal products, such as milk and wool, which supposedly had not been utilized previously,¹⁰¹⁴ gained in importance for exchange and the accumulation of wealth, thereby leading to increasing specialization. Based on Goody’s writing on plough usage and the impact of agriculture,¹⁰¹⁵ Sherratt’s model was largely accepted, but has recently been challenged, as ploughing with cows may predate ploughing with oxen, and farmers’ utilization of milk dates back to the Neolithic.¹⁰¹⁶

Halstead,¹⁰¹⁷ inspired by Goody not only in his writing but also in his methods, therefore proposed a different model for Middle Neolithic and Bronze Age cultivation. What makes his contribution, and consequently the model, particularly valid is his acknowledgement of ethno-

¹⁰⁰⁹ Sherratt 1980; Sherratt 1981.

¹⁰¹⁰ Andrew Sherratt developed a model of *secondary products revolution* for understanding farming in Old World prehistory. This model implies that during the Neolithic, animals were mainly bred for their primary product (meat), whereas animal breeding for secondary products such as milk, wool, traction, ploughing, and riding, emerged in the 4th–3rd millennium BC and its diffusion transformed the Eurasian economy (Sherratt 1981; Sherratt 1983). The latter phenomenon, the use of secondary animal products in 4th–3rd millennium BC, Sherratt labelled the *secondary products revolution*. For more detail, see Chapter III.

¹⁰¹¹ Sherratt elaborated and geographically extended the model previously proposed by Kruk 1973. For a detailed description of Sherratt’s model and its shortcomings, see Chapter III.

¹⁰¹² Bogaard 2004. Sherratt’s use of horticulture is not in line with the anthropological understanding of horticulture. The anthropological distinction between horticulture and agriculture is outlined in Chapter III.

¹⁰¹³ Sherratt 1981.

¹⁰¹⁴ The presence of wool production preceding the Bronze Age finds little support as prior to this period, hair sheep, which do not grow wool at all, rather than wool sheep, were common. In turn, lipid residue data have shown that Neolithic farmers in fact utilized milk – a result that does not accord with Sherratt’s theory. In addition, in Neolithic Knossos, ploughing with cows seemed to predate the 4th/3rd-millennium BC ploughing with oxen (Isaakidou 2006; Isaakidou 2011).

¹⁰¹⁵ Goody 1976.

¹⁰¹⁶ See Helmer et al. 2007; Isaakidou 2011.

¹⁰¹⁷ Halstead 1981; Halstead 1987; Halstead 1992b.

graphic methods. Unique to Halstead's approach is its interdisciplinary core, combining zooarchaeological and archaeobotanical expertise with long-term ethnographic fieldwork, alongside long-term archaeological excavations across the eastern and northwestern Mediterranean, including Thessaly. Halstead argued for the validity of particular practices in contemporary rural areas, which remain relevant when discussing prehistoric relations between the natural and social environments. His model opposed Sherratt's floodplain cultivation, instead proposing a rain-fed, bare fallowing, starting in the Neolithic. According to Halstead,¹⁰¹⁸ cereals and pulses were grown in rotating cycles on river terraces, in gardens or small fields, close to settlements. He argued that rain-fed, small-scale farming in small forest clearings using human and animal labour for tillage would be more suitable during both the Neolithic and the Bronze Age in the Aegean basin. This argument was recently reinforced in his recent publications¹⁰¹⁹ and earlier by Cornelia Becker, who argued that the assemblage of young lambs implies the presence of dwellers at Platia Magoula Zarkou between late winter and spring.¹⁰²⁰

Pollen analysis from a number of sites strengthened Halstead's claim, indicating that the Aegean basin lowlands were wooded¹⁰²¹ until the Middle Bronze Age. A recent study on land-use in northern Greece also showed that deciduous oak forest was continually replaced by pastures and wetlands only after 3450 BC, providing a reference for archaeological pastoral indicators.¹⁰²² Therefore, the garden-like natural conditions assumed by Sherratt did not exist during the Neolithic. Extending Sahlins's DMP model¹⁰²³ to archaeological data – in which the limiting factor of production is not a scarcity of land but labour – Halstead¹⁰²⁴ proposed a model of mixed farming involving household-based horticulture and animal herding in the prehistorical Aegean basin. He emphasized a distinction between two types of animal herding: a) a sedentary, household-based animal herding practised year-round close to the house in dispersed settlements; and b) a communal transhumance of consolidated herds by a small segment of dwellers at nucleated mound settlements.¹⁰²⁵

Halstead's rain-fed, small-scale farming and Sherratt's floodplain model have been tested against the data from and around Platia Magoula Zarkou for the Middle Neolithic period.¹⁰²⁶ The drilling cores contemporary to the Middle Neolithic layers at the *magoula* have shown that its surroundings were frequently flooded from the river side, but also from the Zarkos Mountains, since the Late Neolithic layers at the site are built on top of a 75m-wide gully. The same research also identified an Early Neolithic site, Koutsaki Magoula, without any succeeding layers, which was possibly abandoned due to flooding, close to the Pineios River. Based on these outcomes, the authors rejected Halstead's model and supported Sherratt's floodplain cultivation for the Early Neolithic (6500–6000 BC) and Middle Neolithic (6000–5300 BC) in Thessaly. In addition, they questioned whether there had been a permanent settlement at the site during the Middle Neolithic period,¹⁰²⁷ whereas Halstead argued for year-round occupation at Platia Magoula Zarkou based on zooarchaeological evidence.¹⁰²⁸

Although the analysis of drilling cores support flooding agriculture at Platia Magoula Zarkou during the Middle Neolithic to some extent,¹⁰²⁹ Halstead,¹⁰³⁰ in his recent re-evaluation of

¹⁰¹⁸ Halstead 2014b.

¹⁰¹⁹ Halstead – Isaakidou 2020; Halstead 2022.

¹⁰²⁰ Becker 2000.

¹⁰²¹ Alram-Stern 2004.

¹⁰²² Weiberg et al. 2019.

¹⁰²³ Sahlins 1972.

¹⁰²⁴ Halstead 1981; Halstead 1987.

¹⁰²⁵ Halstead 1987; Halstead 2014b.

¹⁰²⁶ Van Andel – Runnels 1995; Van Andel et al. 1995.

¹⁰²⁷ Van Andel et al. 1995.

¹⁰²⁸ Halstead 2005.

¹⁰²⁹ Van Andel et al. 1995.

¹⁰³⁰ Halstead 2022.

farming at Platia Magoula Zarkou, claimed that if flood farming did occur, it does not seem feasible that it supported grain harvest. Halstead argued that a single type of cultivation, namely the rain-fed, small-scale farming, was most likely at Middle Neolithic Platia Magoula Zarkou.¹⁰³¹ He and other scholars argued that since many of the Neolithic settlements were located away from active floodplains,¹⁰³² ‘floodwater farming is widely irrelevant to the earlier Neolithic in Greece’.¹⁰³³ This excludes the possibility that both, floodwater/floodplain cultivation and rain-fed farming coexisted in Neolithic Greece in space and time, depending on the immediate landscape surrounding the site. Indeed, Halstead and Isaakidou not only excluded floodplain cultivation but they also argued against slash-and-burn cultivation and pastoralism in Greece during the Neolithic. Instead, they promoted a single model of cultivation, namely rain-fed crop farming:

‘By default, the only practically feasible and empirically compatible earlier Neolithic subsistence base in Greece, at least for the archaeologically known open-air villages, was rain-fed crop farming, with a greater or lesser contribution from livestock husbandry.’¹⁰³⁴

With reference to Middle Neolithic Platia Magoula Zarkou, it appears likely that both, floodplain cultivation¹⁰³⁵ and rain-fed crop farming,¹⁰³⁶ could exist side by side, rather than either being an exclusive and the only possible model for cultivation during the Middle Neolithic.

Following the Middle Neolithic (5850–5300 BC) occupation at the site, Platia Magoula Zarkou was settled until the end of the Tsangli-Larissa Phase, the earliest phase of the Late Neolithic period (5300–5100 BC). The cemetery of 60 cremation pots close to the site belongs exclusively to the Tsangli-Larissa period and shows little intra-group social differentiation.¹⁰³⁷ Following a hiatus, the site was resettled in the Early Helladic II (2500 BC) and remained in use until the Middle Bronze Age (1700/1500 BC), when it was abandoned before the Mycenaean period.¹⁰³⁸

The waves of settlement and resettlement at Platia Magoula Zarkou¹⁰³⁹ still raise questions about what the landscape surrounding the site was like during the Early Helladic period. If floodplain cultivation is supported for the Middle Neolithic period, would that imply rain-fed cultivation in the Bronze Age? According to climatological data, the EBA climate in Thessaly was similar to today’s usual level of humidity and precipitation¹⁰⁴⁰ of approximately 460mm annually, mostly between October and March. This indicates that flooding could happen only sporadically during the Bronze Age as a major catastrophic event in the spring and summer, but the seasonal fluctuation in the water table (up to 2m) of the Pineios should be seen as the norm. The surroundings of the magoula remained forested during the Bronze Age,¹⁰⁴¹ which limited the potential for extensive agriculture. This implies that during the Bronze Age, farming at Platia Magoula Zarkou was somewhat human labour-intensive, since, considering Stone Age technology, clearing forests for the cultivation of crops is a time- and energy-consuming practice.

For a combination of these reasons, the floodplain cultivation model for the Early Helladic period at Platia Magoula Zarkou is undoubtedly not applicable. Garden-like natural conditions

¹⁰³¹ Halstead 2022.

¹⁰³² Wilkie – Savina 1997 cited in Halstead – Isaakidou 2020.

¹⁰³³ Halstead – Isaakidou 2020.

¹⁰³⁴ Halstead – Isaakidou 2020, 84.

¹⁰³⁵ Van Andel et al. 1995.

¹⁰³⁶ Halstead – Isaakidou 2020; Halstead 2022.

¹⁰³⁷ Gallis 1982, 103–116.

¹⁰³⁸ Pentedeka 2011.

¹⁰³⁹ The reason for abandonment of Platia Magoula Zarkou at the end of the earliest Late Neolithic Phase (Tsangli Larisa) in approximately 5300 BC remains unknown.

¹⁰⁴⁰ Alram-Stern 2004.

¹⁰⁴¹ Alram-Stern 2014.

surrounding the magoula and regular flooding were not the case during the EBA as the surroundings appear to have been mainly forested. Instead, a combination of Sherratt's Secondary Products Revolution and Halstead's rain-fed, *small-scale mixed farming* model appears feasible as a farming practice during the Early Helladic period. This will be further explored below through botanical and zooarchaeological data from Platia Magoula Zarkou. For now, I return to the question raised above: how far the Pineios' 'behaviour' of today could be inferred in prehistory? Based on the climatic and archaeological data discussed above, I have shown that the Pineios vignette from the surroundings of Platia Magoula Zarkou from March 2017 remains reasonably valid for the EBA, albeit not for the Middle Neolithic, when seasonal flooding of the Pineios River facilitated farming. Therefore, a major change should be distinguished between Middle Neolithic floodplain cultivation/rain-fed cultivation and Bronze Age rain-fed mixed farming at this site. From this basic understanding of the environment of the Bronze Age, the following section will dwell on herding strategies at Platia Magoula Zarkou (see Tab. 11).

Farming and Seasonality at Platia Magoula Zarkou	
Middle Neolithic	Late Neolithic, EBA
Floodplain cultivation (Van Andel et al. 1995) Rain-fed cultivation (Halstead 2022)	Rain-fed mixed farming/Secondary product revolution
Possible seasonal occupation of the site (Van Andel et al. 1995) but not necessarily (Becker 2000)	Year-round occupation of the site

Tab. 11 Differences between farming and the seasonality of households at Platia Magoula Zarkou

V.2. Zoography and Botanography at Platia Magoula Zarkou

The second section of this chapter looks at the evidence from the Neolithic and Early Bronze Age zooarchaeological and botanical assemblage of relevance for Platia Magoula Zarkou. The main aim is to understand whether these data indicate a change in animal breeding and types of farming between the Neolithic and EBA periods, which have previously been inferred from drilling cores and discourses on the importance of the Pineios River for cultivation. What is the dwelling perspective of EBA inhabitants at Platia Magoula Zarkou? How and what type of footprint have they left behind in the archaeological record? Does the attested EBA enclosure wall at the site necessarily support a division between the upper and lower towns? This section provides an overview of mixed regional economies at Neolithic Platia Magoula Zarkou, in comparison to rain-fed mixed farming in which bovine energy was exploited for ploughing fields and other forms of traction and transport during the EBA. The last section of this chapter considers closely two main features that others very likely might be tempted to interpret as immediate evidence for social inequality at Platia Magoula Zarkou: the plough and the presence of the enclosure wall. As I show, however, these two features cannot be simply linked to social inequality: in fact, the enclosure walls have also been attested for societies without ploughing, such as Melanesian big man societies. Instead of thinking of the enclosure walls as necessary indicators of social inequality, it is possible to think of the coexistence of ploughing agriculture and enclosure walls as socio-economic facts accompanying the communal conversion of surpluses to the benefit of the local community rather than solely as a benefit of the chiefly few.

At Platia Magoula Zarkou, the Early Helladic¹⁰⁴² evidence comes from a single context at the site. A rectangular structure, hereafter referred to as a room, was excavated along with pottery, small finds, and botanical and zoological remains. These finds were recovered from

¹⁰⁴² The term Early Helladic is coterminous with the Early Bronze Age and Early Thessalian periods.

inside and around the room. The exact location of the zoological material was not recorded during the excavation, and therefore the actual butchering, refuse dumping, and bone manufacture activities cannot be mapped.¹⁰⁴³ These well-analysed data nevertheless provide valuable information about the consumption and herding strategies of this particular domestic unit, although the archaeological context of a single room poses a major methodological obstacle for household archaeology. The latter approach aims at understanding socio-economic processes through the comparison of multiple contexts (e.g. multiple dwellings, multiple houses) at an archaeological site. Therefore, a household archaeology approach generally requires a larger number of exposed archaeological units (e.g. rooms, structures) for intra-site comparison. Only then is it possible to make inferences concerning economic strategies at that settlement.¹⁰⁴⁴ As there is a lack of such a context at Platia Magoula Zarkou, where different households cannot be compared on-site, the issue will be addressed through a regional comparison with two contemporary Thessalian sites: the hinterland site of Argissa Magoula¹⁰⁴⁵ and the coastal site of Pevkakia¹⁰⁴⁶, which I also visited during fieldwork in the spring of 2017. Undertaking a comparative inquiry into a particularity or resemblance of the context excavated at Platia Magoula Zarkou and other regional sites will enable this study to address similarities and differences in economic strategies within the region.

Late Neolithic Mixed Regional Economy

At Platia Magoula Zarkou, analyses of 10,918 animal bones indicate that sheep and goats predominated during all settlement phases, from the Neolithic to the Bronze Age.¹⁰⁴⁷ During the Late Neolithic (Tsangli Phase), dwellers at Platia Magoula Zarkou relied on multiple subsistence strategies. Among domestic animals, they predominantly herded sheep and goats (62.9%), followed by cattle, (18.5%) pigs (17.0%) and dogs (1.6%).¹⁰⁴⁸ Among wild animals, they predominantly hunted aurochs and red deer, as well as other small game such as foxes, badgers, wild cats, hares, tortoises, and a few birds.¹⁰⁴⁹ No fish remains¹⁰⁵⁰ were recovered from the site, but the dwellers collected river mussels from the Pineios River.¹⁰⁵¹ Among regional exchange items, dwellers at Platia Magoula Zarkou may have exchanged chocolate chert, Melian obsidian, and locally produced grey on grey pottery.¹⁰⁵² Only a single sample of

¹⁰⁴³ Becker 2000.

¹⁰⁴⁴ Tringham 2015.

¹⁰⁴⁵ Argissa Magoula is located on the eastern Thessalian plain, on the northern bank of the Pineios River, 4.5km from the modern town of Larissa and approximately 25km east of Platia Magoula Zarkou. Argissa Magoula is a mound settlement, which was inhabited during the Early Neolithic (6450–6000 BC) (Reingruber 2005; Reingruber et al. 2017) and the Middle Neolithic (5750–5600 BC) (Reingruber et al. 2017). Following a period of abandonment of approximately 2500 years, Argissa was re-settled during EBA 1, around 3000 BC (Hanschmann – Milošević 1976). The Pineios River flows immediately to the south of Argissa Magoula, and has also partially eroded the site. For the location of Argissa Magoula, see Fig. 24 above.

¹⁰⁴⁶ Pevkakia is a coastal mound settlement on the eastern Thessalian plain, located 2km south of the modern town of Volos, next to the Pagasetic Gulf of the Aegean Sea. Pevkakia was first settled during the Late Neolithic (3820–3560 BC– uncalibrated dates) (Andreou et al. 1996), then abandoned for approximately 1000 years, and resettled during EBA 2, around 2400 BC (Christmann 1966). The Pineios River's fluvial connection between Platia Magoula Zarkou and Argissa Magoula does not include Pevkakia: neither through the Pineios River itself nor its adjacent tributaries. The Pineios River empties into the Aegean Sea approximately 40km north of Pevkakia. For the location of Pevkakia, see Fig. 24 above.

¹⁰⁴⁷ Becker 1991.

¹⁰⁴⁸ Becker 1991.

¹⁰⁴⁹ Becker 1991.

¹⁰⁵⁰ The lack of fish bones at Platia Magoula Zarkou could be ascribed to the lack of water sieving during the excavation, so that potential fish bones were missed (E. Alram-Stern, pers. comm. 2020).

¹⁰⁵¹ Becker 1991.

¹⁰⁵² Pentedeka 2011; Pentedeka 2017.

botanical remains from the Late Neolithic points towards cultivation of bitter vetch,¹⁰⁵³ which could have been integrated into the DMP. Ploughing was not attested at this site during the Late Neolithic. The main activities of this mixed regional economy comprised rain-fed mixed farming, including plant cultivation, animal herding, hunting and gathering/collecting, as well as pottery production and participation in obsidian and chocolate chert exchange during the Late Neolithic period at Platia Magoula Zarkou (see Tab. 12).

LATE NEOLITHIC MIXED REGIONAL ECONOMY					
Hunting	Gathering, collecting	Animal herding	Plant Cultivation	Crafts	Regional economies
Big game: aurochs, red deer Small animals: foxes, badgers, wild cats, hares, a few birds	River mussels, no fish remains	Sheep, goats, cattle, pigs, dogs	Bitter vetch	Production center of grey-on-grey pottery	Obsidian, Chocolate chert, and gray on gray pottery exchange
Targeted aurochs, red deer, and tortoise hunting		The primary importance of sheep and goats (without a plow)	Small botanical record (1 seed only)	DMP	Trade within the Thessalian plain and the Aegean World

Tab. 12 Model of mixed regional economy at Platia Magoula Zarkou during the Late Neolithic Period

Early Bronze Age Animal Herders

Despite a break in occupation at the settlement at Platia Magoula Zarkou between the Late Neolithic (Tsangli phase) and Early Bronze Age, the proportional distribution of animal herding did not change much between these occupation periods. During the EBA, sheep and goats (56.7%) remained the predominant groups of animals herded at the site, followed by cattle (22.6%), pigs (22.5%), and dogs (1.3%) (see Fig. 27). The EBA ratio between sheep and goats at Platia Magoula Zarkou was 3:1, which corresponds to the archaeological record from other Thessalian sites, including Argissa Magoula and Pevkakia. This implies that at all Thessalian EBA sites, sheep were generally more significant than goats during the EBA.¹⁰⁵⁴ The ‘consumption ratio’ (3:1 of sheep to goats), however, also implies that within a herd, sheep considerably outnumbered goats throughout centuries of occupation at the site. Caprines¹⁰⁵⁵ at Platia Magoula Zarkou were killed off at an older age during the EBA than in the Neolithic, which confirms the extraction of sheep hair for wool during the EBA.¹⁰⁵⁶ The evidence for wool production during the EBA can be further supported through small finds, which include multiple spindle whorls, loom weights, and needles recovered from the site.¹⁰⁵⁷

With regard to the predominance of sheep and goats at all contemporaneous sites in EBA 2, I will bring in an ethnographic case for highlighting that herding of the same animals at multiple regional sites does not necessarily amount to evidence for only local, on-site subsistence. Instead, the same type of animals bred at different regional sites could also be mobilized for regional alliance and peace building. The prime importance of sheep and goats across Thessalian EBA 2 sites resembles the importance and role of domesticated pigs among the Tsembaga

¹⁰⁵³ Jones – Halstead 1993.

¹⁰⁵⁴ Becker 1991.

¹⁰⁵⁵ The term ‘caprine’ here refers to both sheep and goats. Within zooarchaeology, ‘caprine’ can also be used as an umbrella term for sheep, goats, and wild goats (ibex).

¹⁰⁵⁶ Becker 1991.

¹⁰⁵⁷ Britsch 2018; C. Moser, pers. comm. 2020.

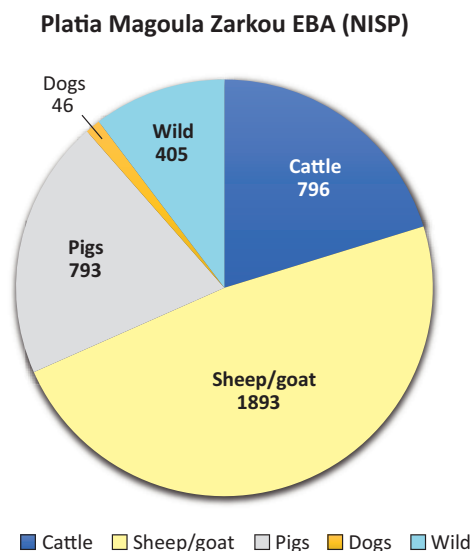


Fig. 27 Proportional representation of domestic and wild animals (NISP) at EBA Platia Magoula Zarkou (after Becker 1991)

and other Maring tribes on Papua New Guinea observed in the 1960s.¹⁰⁵⁸ The rearing of pigs based on vegetable surpluses observed among the Tsembaga in fact benefitted the entire Maring group, not only as subsistence, but also for other purposes. The Maring regularly hosted the year-long pig festival (known as *kaiko*), which rotated from one site to the other throughout the year. The *kaiko* marked the end of the ritual cycle, which can last five to twenty years, depending on the growth of pigs. Moreover, *kaiko* also contributed to the maintenance of peace, the movement of goods, the exchange of personnel (e.g. finding a marriage partner), and the distribution of pork as an important form of protein intake.¹⁰⁵⁹ Although the importance of sheep and goats beyond subsistence at Platia Magoula Zarkou remains challenging to understand from the archaeological data, it is important to note that although all EBA Thessalian sites mainly relied on sheep and goats (among domestic animals),

this does not imply that sheep and goats were exclusively used for subsistence by local village groups. Instead, the primarily reliance on sheep and goats at every Thessalian site could, at the same time, provide the basis for regional competition and alliance building between sites.

Following caprines, cattle (22.6%) were the second most represented group found among domestic mammals at Platia Magoula Zarkou. The culling profiles for the EBA indicate an increase in the slaughter of older individuals: approximately 40% of animals were slaughtered young (below 2 years of age) and 60% of them at an older age (above 2 years of age).¹⁰⁶⁰ Similar to caprines, the culling profiles of cattle indicate the use of secondary products at Platia Magoula Zarkou during the EBA. This was observed from the shift in slaughtering practices towards a majority of older rather than young cattle in the EBA period, in comparison to the Neolithic period, when cattle were mostly slaughtered young, below 2 years of age. Cattle could be used for ploughing, harvesting, and threshing, as well as in transport and trade during the EBA. The use of cattle for traction and ploughing was inferred at Platia Magoula Zarkou from zooarchaeological identification of two morbidly altered cattle cervical vertebrae.¹⁰⁶¹ A small proportion of the EBA assemblage also comprises dog bones, which do not bear any cut marks.¹⁰⁶²

Sharing a similar proportional importance to cattle (22.6%), pigs (22.5%) were the third most represented domestic animal group at Platia Magoula Zarkou. Male and female individual animals were slaughtered around or below two years of age, which primarily indicates pig breeding for meat consumption. A few older female pigs were left alive longer for reproduction, whereas most male pigs were slaughtered below two years of age.¹⁰⁶³ This record finds a suitable comparison with the coastal regional site of Pevkakia, where most pigs were also slaughtered below two years of age.¹⁰⁶⁴

¹⁰⁵⁸ Rappaport 2000 [1968], 22.

¹⁰⁵⁹ Rappaport 2000 [1968], 165.

¹⁰⁶⁰ Becker 1991.

¹⁰⁶¹ Becker 1991.

¹⁰⁶² Becker 1991.

¹⁰⁶³ Becker 1991.

¹⁰⁶⁴ Hinz 1979.

With reference to the well-studied Tsembaga case from Papua New Guinea, the record from Platia Magoula Zarkou is quite different. The big man groups of Tsembaga castrated most of their male pigs at three months of age to prevent mating and to breed more docile animals.¹⁰⁶⁵ The Tsembaga killed most of their pigs, both male and female, after two years of age.¹⁰⁶⁶ As pigs were the main domesticated animal group crucial for the Tsembaga's diet, and considering the effort involved in rearing them (also known as the food reserve on the hoof), Rappaport observed that 'more energy was expended to raise food for pigs than was returned in the form of pork'.¹⁰⁶⁷ The same cannot be said for Platia Magoula Zarkou, where pigs were not reared beyond two years of age and were not the most important animals in terms of diet or rearing effort. Instead, pigs at Platia Magoula Zarkou represented an important, although not the main, share of food reserves on the hoof, which could be fed with vegetal surpluses and through feeding in the forests nearby.

An interesting observation has been made regarding the representation of some meaty pieces recovered at Platia Magoula Zarkou. Within and around the excavated room, specific pieces are underrepresented in the Neolithic and EBA layers. These comprise pig, cattle, and sheep ribs and vertebrae (chops and ribeye), as well as pork and bovine skulls.¹⁰⁶⁸ Whereas the non-meaty parts could be considered as butchery waste, in the case of meaty parts, it seems likely that these were eaten elsewhere, possibly shared beyond the household, which is unavoidable considering the large size of a cow. However, given that these pieces (ribs and vertebrae) were missing from both the Neolithic and Early Bronze Age layers, it appears more likely that this assemblage represents a long-standing butchering and food preparation practice. In this case, meat could be fleshed from bones and consumed within different households, whereas vertebrae and ribs were discarded as butchery waste, outside the living room or the settlement.

Animal Herders but also Foragers

Apart from domestic animals, a small proportion of the EBA assemblage at Platia Magoula Zarkou consisted of wild animals, which gained in importance during the EBA in comparison to the Late Neolithic period. The assemblage of hunted animals comprises large game, such as aurochs and red deer; small game, such as wild boar, foxes, badgers, wild cats, and hares; as well as collected river mussels (e.g. *Unios crassus*); negligible amounts of tortoise and bird bones; and a broken piece of cockle shell from the Aegean Sea.¹⁰⁶⁹ This record demonstrates that dwellers at Platia Magoula Zarkou did not rely exclusively on domestic animals for subsistence, but also integrated wild animals and collected river mussels into their diet, although the latter were of minimal importance for subsistence.

Cutting marks, as a sign of slaughtering and consumption, have been identified on all wild animal bones except for carnivores.¹⁰⁷⁰ Among deer bones, meaty bones are entirely missing at Platia Magoula Zarkou, which may indicate that deer hunting was targeted at the acquisition of hide and antlers that were then brought to the site and partially worked, rather than solely for meat.¹⁰⁷¹ With reference to the ethnographic evidence of more or less sedentary farming communities, dwellers at Platia Magoula Zarkou not only hunted for subsistence: hunting also served as a means for negotiation between male and female power¹⁰⁷² or as the basis for a

¹⁰⁶⁵ Rappaport 2000 [1968], 70.

¹⁰⁶⁶ Rappaport 2000 [1968], 62.

¹⁰⁶⁷ Rappaport 2000 [1968], 62.

¹⁰⁶⁸ Becker 1991.

¹⁰⁶⁹ Becker 1991.

¹⁰⁷⁰ Becker 1991.

¹⁰⁷¹ Becker 1991.

¹⁰⁷² Kent 1989; Zvelebil 1992.

regional gift and commodity exchange¹⁰⁷³ during the EBA. In both sedentary and non-sedentary societies, it is primarily men who hunt larger game, and in both cases hunting is associated with a form of social prestige. In mobile hunter-gatherer societies a male hunter¹⁰⁷⁴ is valued through their larger contribution to the ‘income pool’ for subsistence, which is distributed equally within a hunter-gatherer group.¹⁰⁷⁵ In contrast to that, among sedentary farming societies male hunters gain prestige since ‘hunting confers male identity and status’.¹⁰⁷⁶

The carnivore hunts documented at Platia Magoula Zarkou (and also at Çukuriçi Höyük), are neither unique nor limited to hunting for the consumption of meat. For example, among sedentary agro-pastoralists in southern Ethiopia, hunting a beast (e.g. a lion, leopard, jackal, hyena, etc.) grants a young man permission to marry. The meat of these animals is not consumed, but the hunter (soon to become a married man) is obliged to bring back either the claws, skin, or head of the animal to the settlement. These items serve as proof of his success and the assurance that he has become a fully ‘adult man’ who can marry and provide for his family,¹⁰⁷⁷ according to the male age-class in the region. Among agro-pastoralists, as with hunter-gatherers, hunting is organized communally: men from the same band or village¹⁰⁷⁸ organize and carry out a communal hunt. Interestingly, like in the southern Ethiopian case, the assemblage at Platia Magoula Zarkou does not point towards the consumption of carnivores, since none of the carnivore bones recovered from the site bear cutting marks.¹⁰⁷⁹ Instead, hunting for fur and possibly for the negotiation and retention of male power over females, as a display of power among men, or as an important practice involved in rites of passage, appear very likely to have been common practice during the EBA at Platia Magoula Zarkou.

A striking similarity between Çukuriçi Höyük and Platia Magoula Zarkou is the absence of birds, which were not important hunting prey at either of the sites. In both cases, however, the environmental features do provide a favourable habitat for birds: a forested area close to the Pineios River at Platia Magoula Zarkou, and close proximity to the Aegean Sea, two streams, and a forest at Çukuriçi Höyük. The scarce evidence of birds in the zooarchaeological assemblage at Platia Magoula Zarkou confirms that these were not hunted, as only 15 bird bone fragments were found (out of 10,918 bones analysed), representing a crane, a grey goose, an egret, and a marsh harrier.¹⁰⁸⁰ I have already noted that there were practical reasons for this at Çukuriçi Höyük as, according to ethnographic observations, bird hunting is a time-consuming activity with low return rates. Apart from this, the assemblage from western Anatolia points towards birds (e.g. ducks) being of symbolic importance already associated with the dead during EBA 1, as seen from the duck vessels found in Yortan cemetery. However, widely shared bird symbolism peaked during EBA 2 in coastal and hinterland western Anatolia.¹⁰⁸¹

¹⁰⁷³ Gingrich 2017a.

¹⁰⁷⁴ For the recent archaeological evidence of a 9000-year-old human burial interpreted as a female hunter at the Andean highland site of Wilamaya Patjxa, see Haas et al. 2020. This evidence points towards nongendered labour practices among early hunter-gatherers, where females were also big-game hunters.

¹⁰⁷⁵ Hallowell 1926; Woodburn 1982.

¹⁰⁷⁶ Kent 1989, 6.

¹⁰⁷⁷ Y. Ejigu, pers. comm. 2019.

¹⁰⁷⁸ In the case of sedentary groups, these men belong to different households.

¹⁰⁷⁹ Becker 1991.

¹⁰⁸⁰ Becker 1991.

¹⁰⁸¹ Yılmaz 2016. The lack of birds and their possible symbolic importance in western Anatolia is briefly described in Chapter III. Regarding the symbolic importance of birds, marble owl-headed idols are commonly found in settlements and burial grounds dating to EBA 2 western Anatolia (e.g. Troy, Yortan, Beycesultan, and Seyitömer Höyük). These assemblages point to the symbolic meaning of birds, a belief that was seemingly cultivated during the EBA 2 and 3 periods and even the Middle Bronze Age in western Anatolia. For the distribution and a detailed analysis of owl-headed idols, see Yılmaz 2016. However, the bird-shaped EBA 1 pottery from Yortan cemetery predates the owl-headed marble idols, which indicates that ‘bird symbolism’ emerged in the region during EBA 1. This can be further supported by the lack of birds within the zooarchaeological record, indicating a strong aversion to bird consumption among EBA settlers in western Anatolia. Seemingly, this practice was not

In Thessaly, the assemblage appears to vary between hinterland and coastal sites. A conspicuous absence of birds has been documented at both Thessalian hinterland sites – Platia Magoula Zarkou and Argissa Magoula – whereas dwellers at Pevkakia, on the Aegean coast close to the modern town of Volos, hunted both land and sea birds. Among these, the most common were waterfowl,¹⁰⁸² which can traditionally be used for food, down, and feathers. In Thessaly, there is no evidence for the existence of any religious or funeral symbolism connected to water birds or ducks dating to the Early Bronze Age II. Outside Thessaly, bird symbolism has been found on Early Bronze age jewellery and painted pottery in the Cyclades, and bird-shaped vessels have been recovered from Crete and the Cycladic island of Ano Kouphonissi.¹⁰⁸³

Animal Herders and Foragers: but also Cultivators Using Plough Agriculture

In comparison to the rich animal record, the botanical record recovered from the EBA room at Platia Magoula Zarkou is extremely limited.¹⁰⁸⁴ Only four charred remains have been recovered from the destruction layer of the room: two barley seeds from the southern part of the excavated area, one bitter vetch seed from the central part, and one emmer grain from the north of the room.¹⁰⁸⁵ All of these grains had been prepared for consumption, as none of them contained any threshing remains¹⁰⁸⁶. Moreover, Jones and Halstead¹⁰⁸⁷ proposed that all of these samples within a single room points towards multi-grain household consumption strategies, which does not support the existence of the *Mediterranean polyculture* (e.g. a redistributive economy of specialized products such as olive, wheat, and grape) proposed by Renfrew¹⁰⁸⁸ for this period.

The complementary evidence of the botanical and zoological record at Platia Magoula Zarkou, however, provides considerable evidence for subsistence strategies at the site. Dwellers at Platia Magoula Zarkou relied heavily on domestic animals, especially sheep, but also goats, pigs, and cattle. While pigs¹⁰⁸⁹ were mostly bred for meat, the culling profiles of sheep, goats, and cattle support the utilization of secondary products such as wool, milk, and animal labour, which was not the case at Çukuriçi Höyük. Men at Platia Magoula Zarkou also engaged in communal hunts, in which wild animals were hunted for consumption as well as for the negotiation of power among men and between men and women during the EBA. The four archaeobotanical samples confirm that both cereals and legumes were cultivated around Platia Magoula Zarkou. This is evidence for the rotation of crops rather than land, which can be further supplemented by the use of a plough and the integration of domestic animals into farming through manure. The zooarchaeological and botanical record from Platia Magoula Zarkou therefore supports rain-fed mixed farming in which bovine energy was exploited for ploughing fields, traction, and transport during the EBA (see Tab. 13).

limited to western Anatolia, as the zooarchaeological record from Platia Magoula Zarkou equally confirms the absence of birds within the archaeological context in the EBA Thessalian plain.

¹⁰⁸² Becker 1991.

¹⁰⁸³ Alram-Stern 2004, 328. For a detailed list of sites and authors interpreting bird symbolism during the Early Bronze Age on the Cycladic Islands and Crete, see Alram-Stern 2004, 328.

¹⁰⁸⁴ This result is most likely due to the nature of the excavation, since sieving and flotations (through which more botanical remains could be recovered) were not conducted at Platia Magoula Zarkou.

¹⁰⁸⁵ Jones – Halstead 1993.

¹⁰⁸⁶ ‘Threshing remains’ refers to all waste (which can be recycled and used elsewhere) removed from the plant in the process of threshing to get to the grain. Husk remains are only one group among ‘threshing remains’.

¹⁰⁸⁷ Jones – Halstead 1993.

¹⁰⁸⁸ Renfrew 1972.

¹⁰⁸⁹ There is no certainty about how pigs were fed at Platia Magoula Zarkou although they could have been fed with vegetal surpluses (if any) and through feeding in the forests nearby.

EBA Platia Magoula Zarkou – Zooarchaeological and botanical evidence	
Domestic Animals	Sheep predominating
Wild Animals	Present (big and small game)
Domestic Plants	Present (barley, emmer, bitter vetch)
Planting Strategies	Usage of animal labor for plowing, traction – Agriculture

Tab. 13 Zooarchaeological and archaeobotanical evidence for subsistence at Platia Magoula Zarkou

Ploughing and Social Inequality

Based on the Ethnographic Atlas, Goody showed that ‘in particular the plough is an instrument employed almost entirely by men’.¹⁰⁹⁰ This statement is compatible with recent ethnographic observations in northern Greece¹⁰⁹¹ and Ethiopia,¹⁰⁹² which have shown that women also engage in ploughing in the absence of a husband or a deceased father. This shows that ploughing by women is an exception rather than a rule in societies with plough agriculture. Goody¹⁰⁹³ also showed that the introduction of the plough for cultivation may have resulted in the cultivation of larger pieces of land than under a horticultural regime, as well as increased production of agricultural surpluses. Given that ploughing enables the cultivation of larger fields in a shorter period of time than cultivation by a horticultural regime, this implies that the use of a plough for cultivation would ‘free’ other men within a household (both older and younger) from farming. Provided that women in agricultural societies ‘are either secluded in the home or occupied almost wholly in the domestic sphere’,¹⁰⁹⁴ these men not involved in plant cultivation practices could engage in other subsistence activities or crafts, whereas women mostly limited their activities to the household and domestic crafts.

Goody’s insights can be linked to the archaeological evidence from Platia Magoula Zarkou in the following way. If men were in charge of ploughing and were the owners of the stock, then the agricultural surplus at Platia Magoula Zarkou would necessarily result in major differences between households on-site. Although this cannot be tested against the available archaeological data since only one part of the room has been excavated at this site, there is ample evidence that surplus production not only benefitted particular households, but also the wider village community at Platia Magoula Zarkou. The on-site, collective benefit can be observed through the enclosure wall encircling the mound (see Fig. 28): to construct it, dwellers needed to mobilize communal labour. At Platia Magoula Zarkou, this enclosure not only guaranteed a safe place for a particular household or a dwelling unit, such as has been observed at EBA 2 Lerna¹⁰⁹⁵ or EBA 1 Karataş,¹⁰⁹⁶ but to multiple households within the agglutinated settlement on top of the mound. By contrast, the off-mound settlement at Platia Magoula Zarkou, which resembled the on-mound, agglutinated settlement pattern, was not enclosed.

Given the claim that non-state societies do not have external borders but boundaries (that are permeable and negotiable),¹⁰⁹⁷ and therefore territory among these societies is not commonly perceived as a bounded unit, the evidence from Platia Magoula Zarkou provides the evidence that borders do exist within non-state societies. On the one hand, the archaeological evidence from the EBA settlement of Platia Magoula Zarkou shows that territory on the fringes

¹⁰⁹⁰ Goody 1976, 35.

¹⁰⁹¹ Halstead 2014b, 48.

¹⁰⁹² Schlee – Strecker 2019.

¹⁰⁹³ Goody 1976.

¹⁰⁹⁴ Goody 1976, 33.

¹⁰⁹⁵ Pullen 1985.

¹⁰⁹⁶ Eslick 1988; Eslick 2009.

¹⁰⁹⁷ Barth 1969.

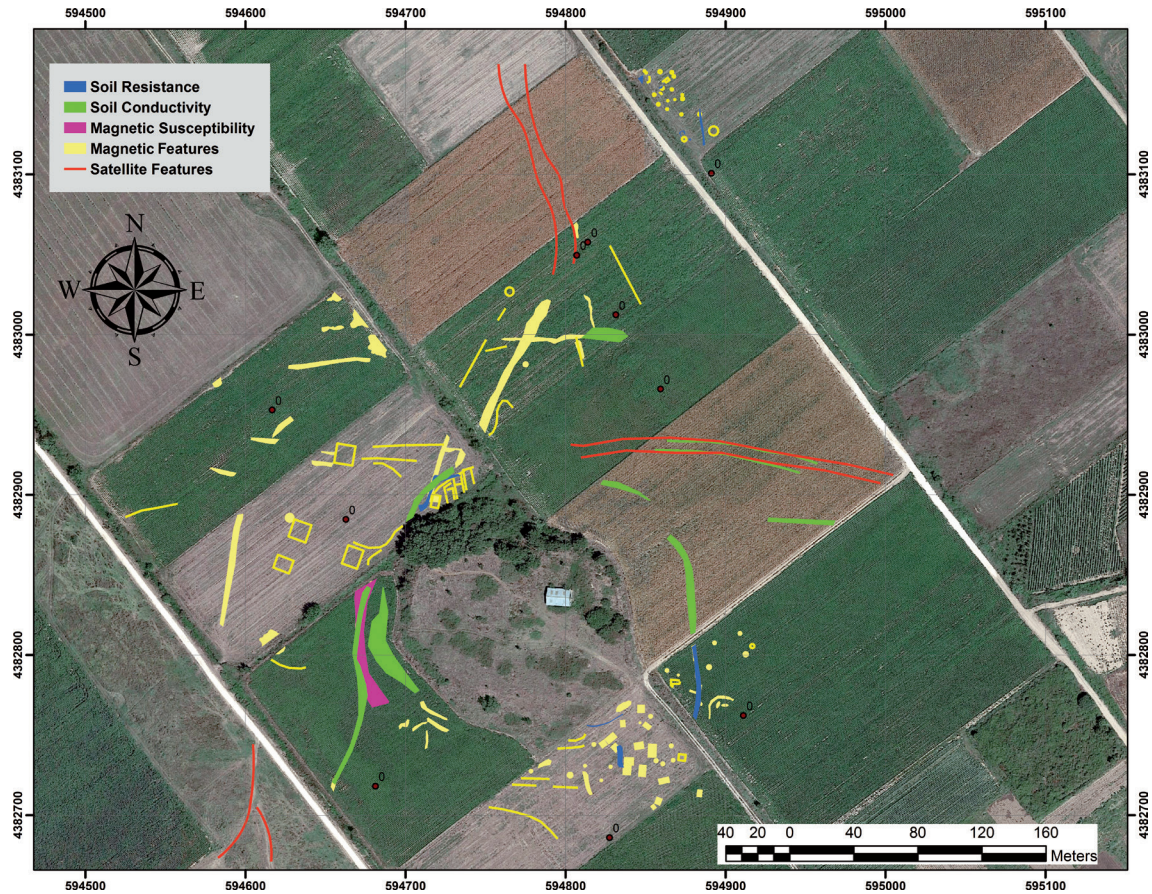


Fig. 28 Circular enclosure surrounding Platia Magoula Zarkou as seen from geophysical investigations (after Sarris et al. 2022, fig. II.2.12)

of the settlement was not a finite and bounded category. This is evident from the off-mound, lower settlement at Platia Magoula Zarkou, which was not enclosed – and therefore the possibility of extension or contraction of the built territory was subject to the life cycles of domestic groups and the possible expansion or contraction of the off-mound settlement. On the other hand, the upper settlement was spatially separated from but archaeologically united with the lower one at Platia Magoula Zarkou. The on-mound settlement was spatially separated as it was built on top of the mound. However, the enclosure wall provided an architectural unity between the on-mound and off-mound settlements. Thus, the same enclosure wall also separated the inner circle of the off-mound settlement from the rest, beyond the enclosure. Therefore, the on- and off-mound settlement within the enclosure wall at Platia Magoula Zarkou was ostensibly a finite, circumscribed, and bounded unit, in contrast to the off-mound settlement beyond the enclosure.

Recent anthropological contextualization of enclosures in the contemporary globalized world defined enclosures as ‘social processes that delimit and restrict the movement of specific goods, people, and ideas’.¹⁰⁹⁸ The direct application of such an understanding to the archaeological record at Platia Magoula Zarkou would then imply that the enclosure at this site was necessarily a border, across which ‘movement is structured within the context of unequal power relations’.¹⁰⁹⁹ However, this specialized view of borders and enclosures – which delimits

¹⁰⁹⁸ Cunningham – Heyman 2004, 293.

¹⁰⁹⁹ Cunningham – Heyman 2004, 293.

the mobility of people, goods, and ideas between states – cannot be simply applied to Platia Magoula Zarkou, which was not an early state, let alone a nation.

Another possible conclusion can be drawn with reference to enclosures documented in non-centralized non-state societies. Recently, Roscoe¹¹⁰⁰ reviewed in detail the colonial and ethnohistorical evidence concerning village fortifications in Papua New Guinea. He showed that village palisades (made of locally available wood, reed, and cane), were the most common form of defensive work in Papua New Guinea up to colonial times.¹¹⁰¹ These man-made palisades established a clear border between villages and the surrounding areas (as well as within villages), although these villages were part of larger imagined communities, the so-called tribal societies (see Fig. 29). These man-made enclosures did not necessarily enclose only whole villages, but also a group of households within a village (see Fig. 29). Moreover, Roscoe (2008) showed that enclosures in these societies not only served as a passive defensive tool to keep attackers out, but also to keep them within the enclosures after an attack.

The conclusion I draw from these numerous ethnographic cases of enclosed sites¹¹⁰² is that the enclosure walls or palisades do not necessarily indicate a two-tiered settlement organization. The latter was suggested for EBA 2 western Anatolia, where enclosure walls seemingly attested ‘the presence of different social groups and administrative mechanisms’.¹¹⁰³ Although the EBA 2 layers of Platia Magoula Zarkou are contemporaneous with EBA 2 in western Anatolia, the same argument cannot be directly applied to Platia Magoula Zarkou. No evidence has been found at Platia Magoula Zarkou to suggest administrative mechanisms or a metric system, although there is evidence for ostensibly different social groups dwelling at the site. In the context of Platia Magoula Zarkou, Roscoe’s research therefore appears to speak more closely to the archaeological record. He demonstrated through ethnographic means that enclosure walls and palisades are also compatible with more or less ‘egalitarian’, non-centralized tribal constellations, such as big man societies in Papua New Guinea. A similar archaeological observation of the sites demonstrated more or less ‘egalitarian’ relations between households at Thessalian Neolithic sites such as Dimini¹¹⁰⁴ and Sesklo.¹¹⁰⁵

Without excavating the off-mound settlement, it cannot be concluded with certainty whether the enclosure wall at Platia Magoula Zarkou was indeed an indicator of unequal power relations¹¹⁰⁶ or whether the economic growth and population pressure within the circumscribed upper settlement at Platia Magoula Zarkou made it necessary to extend the settlement beyond the enclosure walls.¹¹⁰⁷ According to the geophysical prospection (see Fig. 28 above), there are no visible differences between the on-mound and the off-mound settlements at Platia Magoula Zarkou, and there is no archaeological evidence for administrative mechanisms at the site. This evidence points towards rather balanced power relations between the upper and lower settlements at Platia Magoula Zarkou. Considering this record, it is apparent that neither the existence of ploughing agriculture (that could support the allocation of surpluses in unequal ways) nor the presence of enclosures (that ostensibly divided social groups) supports the interpretation of a two-tiered social organization at Platia Magoula Zarkou, necessarily indicating a centralized social organization such as a chiefdom. Instead, the enclosure at Platia Magoula

¹¹⁰⁰ Roscoe 2008.

¹¹⁰¹ Farmer 1957, 250; Roscoe 2008, 507.

¹¹⁰² See Roscoe 2008.

¹¹⁰³ Şahoğlu 2005, 340.

¹¹⁰⁴ Despite the existence of two enclosure walls at Late Neolithic Dimini, the diet did not vary between dwellers residing within the inner enclosure and those within the outer enclosure (Halstead 1992a).

¹¹⁰⁵ Souvatzi 2012; Souvatzi 2008; Souvatzi 2014.

¹¹⁰⁶ Cunningham – Heyman 2004, 293.

¹¹⁰⁷ Population growth and escalating economic power was ascribed to the EBA 2 western Anatolian fortified settlements in the eastern Aegean islands (Poliochni, Thermi) and western Anatolian coastal sites (Troy, Bakla Tepe, Liman Tepe) (Kouka 2016b, 131).

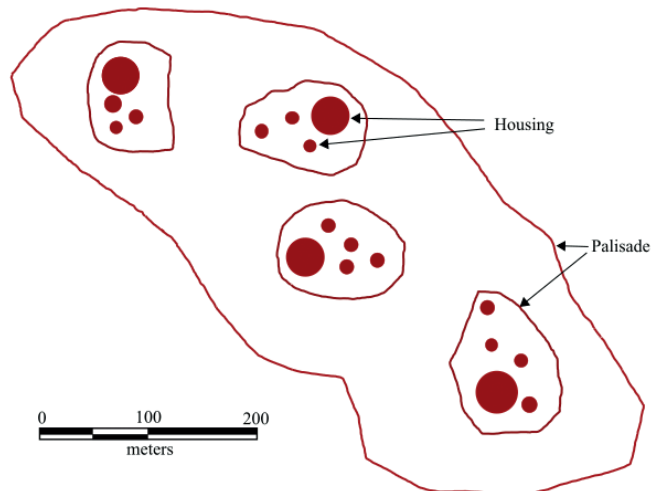


Fig. 29 A suggested reconstruction of an Anga fortified settlement (after Roscoe 2008, fig. 3)

Zarkou can be understood as an internal, permeable ‘border’ across which the movement of objects, ideas, and most likely people was not limited and restricted but permeable. The enclosure at Platia Magoula Zarkou therefore does not support the existence of a division between a ruling elite and commoners, but is instead a product of the communal conversion of surpluses to the benefit of the local community, such as has recently been proposed for prehistoric affluent societies by Roberto Risch.¹¹⁰⁸

V.3. The Ethnographic Contextualization of Animal Remains at Platia Magoula Zarkou

Given that the animal remains from Platia Magoula Zarkou support the secondary product revolution, I look into the ethnographic evidence of what types of societies correspond to culling profiles at this site. The ethnographic analogy is here used to support an actors- or people-centred view of quantitative data coming from this site, beyond the simple indicators of milk, meat, or wool exploitation that culling profiles are commonly used for. Based on this ethnographic comparison, the chapter concludes with the contextualization of pastoralism vs. transhumance at this site, indicating that the more or less sedentary EBA 2 society at Platia Magoula Zarkou may have integrated transhumance on the neighbouring Pindus Mountains alongside the rain-fed mixed farming, in which the site and its households were embedded. Without evidence for any overall mobility of households at EBA 2 Platia Magoula Zarkou, we cannot exclude the partial mobility of segments of these household members on a seasonal basis, these being in charge of transhumance pasturing for domestic animals such as sheep, goat, and cattle.

In this section, the archaeological record outlined above will be contextualized regarding ethnographic evidence of sheep-herding societies in moderate climate zones of western Asia, as well as outside this region. As the ratio between sheep and goats at Platia Magoula Zarkou differs widely from the ratio at Çukuriçi Höyük, the difference will be outlined with respect to (i) ecological differences at both sites; (ii) physical properties specific to sheep and goats, as well as the organization of labour with reference to sheep and goat herding; and (iii) the available farming technology.

¹¹⁰⁸ Risch 2018.

The ratio between sheep and goats at Platia Magoula Zarkou, where sheep largely outnumbered goats in the herd, is similar to 20th-century ethnographic accounts of Iranian pastoral groups (alongside widespread evidence in most parts of southern Arabia). Among the Lur (a pastoral tribe in the Zagros Mountains), goats were economically less significant than sheep. The same was reported for the Basseri in Fars Province¹¹⁰⁹ and the Shahshevan in northwestern Iran.¹¹¹⁰ Nevertheless, goats were indispensable for pastoralism as practised by the Lur.¹¹¹¹ In the absence of sheepdogs, Black-Michaud¹¹¹² reported that at least two to three goats (but usually more) were mixed into a flock of a hundred sheep to prevent them dispersing over the terrain, to assist the shepherd, and to lead the herd. As sheep produce less milk than goats, the latter were more valued for their milk by the Lurs. Among secondary products, the Lurs used goat skins as twine, horse blankets, and as containers for milk and drinking water. Despite these advantages, goats never constituted more than 15–20% of the herd among the Lur.¹¹¹³

Evidence for Multiple Sheep Products: Meat, Milk, Wool, and Possibly Exchange

These ethnographic observations correspond to the record at Platia Magoula Zarkou, where the ratio of sheep consumption, and therefore also the number of herded animals was much larger than that of goats: the sheep-to-goat ratio at Platia Magoula Zarkou during the EBA was 3:1.¹¹¹⁴ However, the fact that sheep reproduce more slowly than goats (as they have fewer offspring) indicates a conscious preference for sheep over goats. This could only be sustained by well-organized herd management, in which a community controlled the quicker reproduction of goats by keeping fewer of those in the herd than sheep. However, despite the similarities in the proportion of sheep to goats between Platia Magoula Zarkou and the accounts of pastoral nomads from Western Asia, there is a major difference between the two communities. The zooarchaeological record at Platia Magoula Zarkou provides evidence that animals were slaughtered throughout the year,¹¹¹⁵ and therefore the households were occupied year-round. By contrast, the pastoral households in Western Asia described above (in contrast to those in southern Arabia¹¹¹⁶), including the herd and all members of a household, were mobile. Therefore, these accounts do not completely explain the case of Platia Magoula Zarkou, but they nevertheless highlight potential uses and breeding motivations for sheep and goats that can be partially applied to the prehistoric case study.

The ratio between sheep and goats has been widely discussed within zooarchaeology,¹¹¹⁷ in ethnographic accounts of nomadic tribes,¹¹¹⁸ and for more or less sedentary mixed farming groups, in which both sheep and goats are kept close to a settlement, year-round.¹¹¹⁹ Some authors have favoured explanations of the predominance of sheep over goats based solely on environmental factors¹¹²⁰ or the physical needs and the abilities of the two types of animals, including the question of which of them can better adapt to a particular environment.¹¹²¹ Other scholars have provided explanations beyond ecological determinism, recognizing the

¹¹⁰⁹ Barth 1961.

¹¹¹⁰ Tapper 1979.

¹¹¹¹ Black-Michaud 1986.

¹¹¹² Black-Michaud 1986.

¹¹¹³ Black-Michaud 1986.

¹¹¹⁴ Becker 1991.

¹¹¹⁵ Becker 1991.

¹¹¹⁶ Gingrich – Heiss 1986.

¹¹¹⁷ Payne 1973; Halstead 1992a; Halstead 1996; Halstead 2005; Helmer et al. 2007; Halstead 2011; Halstead 2015.

¹¹¹⁸ Barth 1956; Jacobs 1965; Tapper 1979; Black-Michaud 1986; Lancaster – Lancaster 1991.

¹¹¹⁹ Jacobs 1965; Yalçın 1986; Nagy et al. 1991; Boyazoglu 2002; Gültekin et al. 2017.

¹¹²⁰ Boyazoglu 2002.

¹¹²¹ Halstead 1992b; Halstead 1996.

importance of social organization, which disproves the Malthusian growth model of animal herds in non-state societies that are not dependent on a market economy,¹¹²² and a multiplicity of factors that lead to either a preference for sheep or goats among a given community.¹¹²³ I associate my work with the latter two approaches. By understanding the multiplicity of factors, including the local environment; the physical properties of sheep and goats; the utility of sheep and goats; and local labour organization and its socio-political context, I aim to understand the predominance of sheep over goats at Platia Magoula Zarkou through multiple lines of evidence.

Within prehistoric archaeology, the advantage of sheep over goats has been attributed to the ability of sheep to store fat, which indicates a low-risk meat strategy¹¹²⁴ since the stored tail fat can be used by sheep themselves to survive during the dry seasons when pasture is poor. Apart from meat and milk products, sheep provide two important secondary products for human consumption: sheep tail fat and wool. Rendered tail fat, which can be stored at room temperature over long periods of time and is easy to transport, is still commonly used in Near Eastern cuisine today. When preparing lamb meat, the sheep tail fat can be cut off. Therefore, it is very likely that the dwellers at Platia Magoula Zarkou were already knowledgeable in processing sheep tail fat (among other animal fats) from the Neolithic on, and therefore also during the Bronze Age. Traces of carcass fat found in pots are more empirically supported than evidence of milk processing during the Neolithic.¹¹²⁵

Continuity in the extraction of wool between the Neolithic and the Bronze Age has not been demonstrated. In Neolithic Thessaly, sheep were hairy, and the process of switching to woolly-coated sheep has only been documented for the Bronze Age,¹¹²⁶ around approximately 3000 BC. Along with this change, considerable differences between Neolithic and Bronze Age sheep exploitation is evident from the culling profiles at Platia Magoula Zarkou. Whereas during the Middle Neolithic 15% and in the Late Neolithic 17% of animals were slaughtered at an old age, the number of older slaughtered animals increased significantly to 28% in the Bronze Age. The size of the sheep increased from the Neolithic to the EBA, which has also been reported for two other Thessalian sites – Argissa Magoula and Pevkakia.¹¹²⁷ This indicates that dwellers at Platia Magoula Zarkou employed new herding strategies during the EBA, since the larger proportion of slaughtered older sheep indicates wool production,¹¹²⁸ or more precisely, a combined model of fleece-/wool-, milk-, and meat-oriented herding strategies.¹¹²⁹ In proportion to female sheep, a large number of male sheep at Platia Magoula Zarkou were slaughtered at a young age, a characteristic of meat production.¹¹³⁰

The EBA culling profiles at Platia Magoula Zarkou are comparable with the strategies of Basseri herders, where sheep raising served various purposes, including the production of milk and milk products (e.g. yoghurt, *kashk*,¹¹³¹ sour milk, and cheese), lamb skins, wool, and woollen rugs. Barth¹¹³² observed that among the Basseri, ‘most male and many female lambs and kids are slaughtered for meat’, which was not dried, smoked, or salted, but eaten fresh. Despite sheep playing an important role in subsistence among the Basseri, they exchanged

¹¹²² Barth 1961; Rappaport 2000 [1968].

¹¹²³ Lancaster – Lancaster 1991.

¹¹²⁴ Halstead 1992b; Halstead 1996.

¹¹²⁵ Halstead 2014a, 421; Whelton et al. 2018.

¹¹²⁶ Benecke 1994.

¹¹²⁷ Hinz 1979.

¹¹²⁸ Becker 1991.

¹¹²⁹ Helmer et al. 2007.

¹¹³⁰ Becker 1991.

¹¹³¹ *Kashk* (کَشک in Persian, كَشك in Arabic, *keşk* in Kurdish, *keş peyniri* in Turkish) is drained yoghurt or sour milk, formed into chunks.

¹¹³² Barth 1961, 8.

they left alive much longer than the Basseri did. The Basseri instead slaughtered most young rams and herded the rest of the uncastrated rams together with the ewes before selling them on the market.¹¹³⁵ For the Lur, sheep and goats were a means of subsistence, but at the same time they were primarily forms of 'pastoral capital'.¹¹³⁶ Lur sheep herding was not only an ecological specialization but also an economic one, targeting urban consumers through market exchange. Among Lurs, culling was 'reduced to the automatic elimination by sale of ewes when their teats show infertility (usually at 5.5 or 6.5 years of age) and of stud rams before they enter into their seventh year'.¹¹³⁷ Hence, Lur pastoral households made use of milk and milk products on daily basis, but did not slaughter either rams or ewes solely for consumption:

'In Luristan female sheep and goats are never sold and never slaughtered when still of an age to bear young unless barren or quite clearly on the point of death ... If, because of the location of the camp and the distance involved, it is feared that the animal will die on the way, it is slaughtered and eaten by the herder, his family and other households in the same camp, to which neighbourliness dictates that he should offer a portion of the uncooked meat.'¹¹³⁸

As shown above, the Lur intentionally herded sheep to be long-lived in order to maximize the production of milk and milk products for subsistence, as well as wool and sheep for sale on the market. The author emphasized that among Lurs, sheep are rarely slaughtered for daily subsistence, since 'for 90% of Luri nomads the only domestic alternative to milk products as a source of animal proteins is the flesh of their own sick and wounded animals'.¹¹³⁹

This same practice was not observed among the Basseri or at Platia Magoula Zarkou, where herders slaughtered a larger proportion of young rams and some young ewes. By contrast, the Lurs did not slaughter their young rams, but instead castrated them. This suggests that sheep and goats were not perceived solely as 'capital' or as a store of value and wealth at Platia Magoula Zarkou, as was the case for the Lurs. Instead, at the Thessalian EBA site, like among the Basseri, caprines were seen as a means of subsistence in which both primary (meat – including the meat of young animals) and secondary products (milk and milk products, wool) served as multiple sources for subsistence and reproduction during the EBA, without specialization based solely on wool production or sheep breeding for exchange. Correspondingly, it is important to highlight that sheep and goat breeding at EBA Platia Magoula Zarkou did not represent a specialized animal breeding economy: caprine breeding constituted a large share of a mixed animal breeding economy, which also included cattle and pigs.

Another difference between Basseri nomads compared to the Shahshevan was observed regarding the inheritance and transfer of stock. Whereas Basseri sons inherited an equal share of the stock from their father at marriage,¹¹⁴⁰ among the Shahshevan, stocks were owned by joint paternal and fraternal households, which means that Shahshevan sons did not own an independent herd until their father's death. This difference can be ascribed to differences in household size, stock size, male life spans, and requirements for labour; however, many of these differences can primarily be ascribed to the larger or smaller sizes of pastures. Among Basseri households, pastures were small and so was the number of stock owned; among the Shahshevan, larger, joint households managed larger herds.¹¹⁴¹ Considering the similarity in consumption and animal breeding strategies between the Basseri and dwellers at Platia

¹¹³⁵ Tapper 1979; Black-Michaud 1986.

¹¹³⁶ Black-Michaud 1986.

¹¹³⁷ Black-Michaud 1986, 53.

¹¹³⁸ Black-Michaud 1986, 46.

¹¹³⁹ Black-Michaud 1986, 43.

¹¹⁴⁰ Barth 1961, 18–19.

¹¹⁴¹ Tapper 1979.

Magoula Zarkou, it is likely that a flock of sheep and goats was owned by a single household, transferred from a father to sons when they married. As sheep were bred for their wool, meat and milk, this would grant each household at Platia Magoula Zarkou access to the relevant means of subsistence.

Pastoralism vs. Transhumance

From the above accounts, it has become evident that dwellers at Platia Magoula Zarkou were not pastoralist nomads, as they engaged in both animal breeding and land cultivation. Moreover, they bred mixed herds of caprines, cattle, and pigs, the latter furthermore indicating a more or less sedentary lifestyle. Even so, there is supporting evidence for the possible mobile breeding of caprines at Platia Magoula Zarkou. Eleven pathologies were found on the EBA caprines, favourable conditions for transhumance existed around the site, with pastures at different altitudes.¹¹⁴² Here, it is necessary to distinguish between two different types of livestock-oriented modes of subsistence activities, namely pastoralism/nomadism and transhumance. The traditionally interchangeable (albeit problematic) use of pastoralism/nomadism and transhumance within socio-cultural anthropology has recently been addressed elsewhere;¹¹⁴³ however, the misuse of the two terms also persists in zooarchaeology.

For a definition of what are actually two distinct economic and social systems, I follow the encyclopaedic entry in the *International Encyclopedia of Social and Behavioral Sciences*. There, pastoralism is defined as ‘a mode of subsistence that involves raising domestic animals in grassland environments using herd and household mobility’,¹¹⁴⁴ which is the case for the Basseri, Lurs, and Shahshevan pastoralist groups described above. In turn, transhumance is understood as a ‘form of mixed farming, practiced by the inhabitants of settled communities, technologically adjusted to a certain set of environmental conditions, which combines livestock herding with arable agriculture’.¹¹⁴⁵ Transhumance was and still is practised in the Alps, the Balkans, the Himalayas, and other regions across the world where the topography allows for movement between summer pastures at higher and winter pastures at lower elevations.

Within these two distinct, albeit ideal types of subsistence, household mobility plays a distinctive role. In pastoralist societies’ dwellings, the herd, and all household members are on the move, constantly moving to fresh grassland throughout the year. By contrast, transhumance is practised seasonally by only a small segment of a local resident unit. Livestock run in consolidated herds, moving to higher grounds for pasture in the spring and returning to the village at the end of the summer. In winter, animals are stalled and fed or simply fenced close to the settlement. The majority of the population is sedentary and resides in the village throughout the year, engaging in the cultivation of crops and craft activities, as well as storing enough food and fodder for winter (see Tab. 15). As Platia Magoula Zarkou was occupied throughout the year, this eliminates the possibility of pastoralism, linked with the permanent mobility of households. Instead, a form of transhumance, as an integral part of mixed farming, similar to Halstead’s model, remains likely.

Transhumant herding of sheep and goats at Platia Magoula Zarkou is further supported when considering the topographic surroundings of the site. Platia Magoula Zarkou is located on the edges of the vast Thessalian plain, in the foothills of the Zarkos Mountains (highest peak at 734m) that are linked to the higher Pindus Mountains in the west (highest peak at 1424m). The Zarkos and Pindus mountains were suitable for summer pastures. Until recently these pastures were exploited by Vlachs, a transhumant group who moved seasonally along

¹¹⁴² Becker 1991.

¹¹⁴³ Schuyler 2005.

¹¹⁴⁴ Galaty 2015.

¹¹⁴⁵ Schuyler 2005, 359.

	Pastoralism/Nomadism	Transhumance
Horticulture/Agriculture	Absent	Present
Household mobility	Whole household is mobile	Only a small segment of a household or a village is mobile, on a seasonal basis
Dwelling mobility	Mobile or seasonal dwellings	Permanent dwellings, additional seasonal dwellings on summer pastures
Herd mobility	Mobile herds	Seasonally mobile herds
Animal stalls	Absent	Animals stalled in the winter, but not necessarily
Storage of fodder	Absent	Present but not necessary, during the winter animals may graze on harvested fields, provide manure

Tab. 15 The difference between pastoralism and transhumance (after Schuyler 2005; Galaty 2015)

a south–north axis, between the Thessalian plain and the Pindus Mountains. Vlachs practised mixed farming in the lowlands in the summer while the upland summer pastures were solely exploited by grazing. Vlachs were involuntarily settled during the 20th century, due to land reforms (including forests, meadows, fields, and pastures) that limited access to previously communal spring and summer pastures.¹¹⁴⁶

V.4. Raising Livestock: A First Supra-Regional Comparison between Platia Magoula Zarkou and Çukuriçi Höyük

Location Evidence for Transhumance at Platia Magoula Zarkou

The material for EBA Platia Magoula Zarkou presented above provides a perspective on dwelling that is rather different from Çukuriçi Höyük. Plough-based agriculture and potential transhumance for Platia Magoula Zarkou stand in stark opposition to Çukuriçi Höyük's horticulture without a plough, with the herding of domestic animals on a sedentary horizontal scale. Nevertheless, certain similarities between the two sites regarding subsistence practices persist. This includes the hunting of game, collection of wild fruits and nuts, and a wider participation in regional mixed economies. Based on the wider regional comparison of Platia Magoula Zarkou, this chapter's conclusion shows that sheep may have been raised not only for the Secondary Products Revolution, meaning for wool, but also as an important regional item of exchange and even competition between the big man societies in the EBA 2 Thessalian plain. As Pevkakia and Argissa, which are contemporaneous to Platia Magoula Zarkou, also bred mostly sheep, this provides a major structural similarity to Melanesian big man societies, where pigs were the main item of regional exchange and competition between households.

In a strictly contemporaneous context to western Anatolia, during EBA 2, the 'sheep culture' of Thessaly was parallel to the emerging 'cattle culture' in western Anatolia. A later slaughtering of sheep at Platia Magoula Zarkou during EBA 2 in comparison to the Neolithic period therefore supports the shift from predominantly local consumption of sheep during Neolithic times to both local consumption and regional competition based on sheep breeding during the EBA 2 period. In both cases, these processes were not detached from households but based on household-related breeding and competition between dwellers at this site as well as in the wider region. Why is this significant to the central thesis of this book? Because

¹¹⁴⁶ Halstead 2014b, 305, 335.

changes in herding strategies are not only relevant for transformations in animal breeding and its manipulation. They are also changes in a dwelling perspective, which resonate within households as well as in the wider social and regional landscape.

Traditional preferences for either sheep (at Platia Magoula Zarkou) or goats (at Çukuriçi Höyük), and the differences between the predominance of sheep or goats can also be assigned to environmental factors. Contemporary precipitation indicates a considerable difference between the Thessalian plain (with approximately 450mm per year) and the more humid conditions in the Izmir region (with approximately 700mm annually). In both cases, most of the rain falls during the winter season, between October and March, and seasons of drought are not an exception but a shared characteristic of the Mediterranean climate.¹¹⁴⁷ In the case of Çukuriçi Höyük, the higher precipitation facilitated year-round breeding close to the site, as discussed in Chapter III, whereas at Platia Magoula Zarkou less precipitation made the seasonal movement of animals more likely.

The differences in the numbers of sheep and goats at Çukuriçi Höyük and Platia Magoula Zarkou can also be contextualized with respect to topography.¹¹⁴⁸ The restricted basin at Çukuriçi Höyük, which was partially covered with marshes, was more suitable for goats than sheep due to their feeding practices. As goats are browsers, they can easily cope with limited pastures,¹¹⁴⁹ which was the case in the immediate surroundings of Çukuriçi Höyük. In turn, grazing sheep were better adapted to the Thessalian plain, as they require extensive pastureland for grazing.

All three Thessalian EBA sites – Platia Magoula Zarkou, Argissa Magoula, and Pevkakia – are located on alluvial plains surrounded by mountains reaching up to 1500m in elevation. Mountainous environments adjacent to plains provide distinct climatic and soil zones in which both the fertile deep soils of the Thessalian plain and the steep rocky slopes of the Pindus Mountains could provide economically important landscapes. In this case, the location evidence further supports the possibility of transhumance in later prehistory.¹¹⁵⁰ Secondly, animal ploughing and traction was practised at Platia Magoula Zarkou, whereas it has not been confirmed at Çukuriçi Höyük. This implies that at Platia Magoula Zarkou during the EBA farming was less human labour- and land-intensive, meaning that more land could be cultivated by a single household, irrespective of its size. This would free some of the men and possibly children belonging to the same household from plant cultivation activities over the summer, who could then take the animals to higher pastures in the spring and return in the autumn, while the rest of the community could engage in plant cultivation and craft activities.

Highly speculative, albeit possible, is the interpretation that the missing pork and beef parts at Platia Magoula Zarkou were processed and taken to the summer pastures, where either

¹¹⁴⁷ I stayed in Selçuk (western Anatolia) in October and November 2018. Except for a big storm on the weekend before my arrival, there were no rainy days until the very end of November, when the humidity was extremely high and the temperatures cooled down to just a few degrees Celsius overnight. Before my departure, Stephanie (the DOC-team member and zooarchaeologist) and I visited Bakla Tepe, a site contemporaneous with Çukuriçi Höyük, located 25km north of Selçuk. Bakla Tepe was supposedly located below an immense hydroelectric dam, as seen from Google Maps. We drove by without being able to spot any signs of the Tahtalı Dam, except for the wire fence surrounding it. We parked the car next to the fenced wall and the doors leading to the dam's interior, patrolled by two guards who were stationed in a white cargo container. They walked out and we asked about the location of the prehistoric site. One of them pointed towards a distant spot covered with a small patch of water – we knew the site was underwater, but we were not able to locate it ourselves. However, this gave me the opportunity to inquire about the lack of rainfall that season. I asked, 'Su nerede?' meaning 'where is the water?' in my broken Turkish. One of the guards quickly adjusted to my language expertise and responded: 'Yağmur yok – su yok', meaning 'no rain – no water'.

¹¹⁴⁸ Lancaster – Lancaster 1991; Lancaster – Lancaster 1992.

¹¹⁴⁹ Lancaster – Lancaster 1991.

¹¹⁵⁰ Forbes 1995.

smoked or salted meat would allow the ‘shepherds’ to survive over the summer months.¹¹⁵¹ This does not downplay the importance of sharing meat (especially beef) beyond the household, but the evidence that the same meaty pieces would be consumed outside the room over a few centuries remains unlikely. Therefore, the continuity of dominance of sheep along with the absence of the same meaty parts at Platia Magoula Zarkou supports the interpretation that this assemblage results from labour organization at the site, rather than representing a redistributive economic system.

Labour Organization at Çukuriçi Höyük and Platia Magoula Zarkou

With reference to the overall organization of labour, the main differences between Çukuriçi Höyük and Platia Magoula Zarkou are not limited to animal herding strategies. Although at Çukuriçi Höyük dwellers bred domestic animals close to the site all year round, at Platia Magoula Zarkou, transhumant herding is more likely. The latter led to the absence of some men as well as older children and unmarried youngsters in the summer months, whereas dwellers appear to have been more sedentary at Çukuriçi Höyük. This can be further supported by metallurgical production, which at the Anatolian site moved from open spaces in the Late Chalcolithic into individual houses during the EBA, whereas only a single copper pearl was found at Platia Magoula Zarkou.¹¹⁵² In the room at Platia Magoula Zarkou no other metal tools have been excavated, whereas at Çukuriçi Höyük the DMP ensured the production of metal tools for domestic use and (in a limited proportion) also for exchange. Therefore, at Platia Magoula Zarkou, males seem to make a stronger contribution to domestic economies through transhumant animal herding and the ploughing of soils, whereas at Çukuriçi Höyük, rain-fed cultivation remained in the hands of women, in the absence of the plough. Meanwhile, males invested more labour into the production of metals at the site, which was only possible through the greater contribution of women, and especially of children and very young adults, to animal herding close to the site and to cultivating the fields.

In coastal and hinterland western Anatolia sheep were more important at all other contemporaneous sites except Çukuriçi Höyük. On a similar note, Çukuriçi Höyük also differed from the other contemporaneous sites in terms of the scale of metal production. Whereas at other regional sites metalworking was limited to a particular household in the restricted integration manner as previously outlined, at Çukuriçi Höyük metal production was of a *generalized craft integration* type. From this, it appears that goat herding, which is less labour-consuming than sheep herding, is strongly linked to intensive metal production, whereas sheep predominated at all other sites where metalworking was not a village expertise at the dawn of the EBA.

On the Thessalian plain, the earliest deliberate smelting of arsenical copper alloys dates to the Late Neolithic period, based on the evidence from the Late Neolithic eastern Thessalian sites such as Dimini, Sesklo, and Pevkakia, and arsenical copper smelting continued into the EBA 1 period at Dimini and Petromagoula.¹¹⁵³ Except for Rachmani, Thessalian Late Neolithic and EBA sites providing evidence of deliberately smelted arsenical copper tools and weapons were located within a radius of 50km from the four different copper sources close to the modern coastal town of Volos in eastern Thessaly.¹¹⁵⁴ All of them are eastern Thessalian sites, either coastal or sites just slightly inland from the Aegean Sea, located on the major land-based trading routes.¹¹⁵⁵ Most of the artefacts recovered from these sites comprised tools rather than weapons and they were commonly recovered from settlements and not graveyards.¹¹⁵⁶ It is

¹¹⁵¹ Becker 1991.

¹¹⁵² C. Moser, pers. comm. 2015.

¹¹⁵³ McGeehan Liritzis 1990, 231.

¹¹⁵⁴ McGeehan Liritzis 1990, 231; Tanasi et al. 2019.

¹¹⁵⁵ McGeehan Liritzis 1990, 231.

¹¹⁵⁶ McGeehan Liritzis 1990, 231.

also significant that metalworking has not been widely attested in the Thessalian hinterland, including Platia Magoula Zarkou.

Therefore, it is evident that Platia Magoula Zarkou, located in the western end of the Thessalian plain was not an important metalworking centre and neither was the site located close to metal sources. Instead, wool production and sheep herding played an important role in most of the western Thessalian EBA sites, whereas metalworking was more widely attested in eastern Thessalian coastal sites. The reasons for this are manifold. Firstly, transhumant sheep breeding was ecologically possible. The Zarkos and Pindus mountains close to Platia Magoula Zarkou and Argissa, as well as the Magnesia Mountains near Pevkakia, provided suitable high-altitude summer pastures complementary to the winter pastures on the Thessalian plain. Secondly, the adoption of the plough allowed some men to detach themselves from plant cultivation and to be absent from the village community over the summer months. These men would take care of the sheep and goats in the higher summer pastures in spring and summer, and return to the community over the winter. Thirdly, the production of wool and woollen products seems to have been of greater importance in western Thessaly, whereas metalworking was more widely attested on the Eastern Thessalian Plain, close to important land-based and maritime exchange routes, overlapping with local metal sources. That implies that whereas men, women, and children dedicated time to metal production in the households at Çukuriçi Höyük, men at Platia Magoula Zarkou contributed to subsistence through ploughing and transhumance, while women more likely engaged in weaving and the production of fleece and woollen items.

Sheep at Platia Magoula Zarkou played an important role in subsistence (meat, milk, and milk products) and were not solely a store of value or exploited only for wool or exchange. That view is supported through ethnographic accounts of pastoral communities in Western Asia. As the assemblage of the sheep-to-goat ratio at Platia Magoula Zarkou resembles the record from other Thessalian plain sites, wool and sheep were of specific importance for the regional mixed economy during the EBA, having a similar role to pigs among big man societies in Melanesia. In the latter region, despite the fact that each household in the broader region bred pigs, these animals served as a primitive form of wealth, being an important item for marriage exchanges, feasting, barter exchange, and competition between households on a local and regional scale.¹¹⁵⁷ Therefore we should not postulate that within EBA Thessaly sheep were present everywhere or assume that households were self-sufficient, but should instead consider that these animals and items played a key role in the establishment and maintenance of alliances beyond the household. For a reconstruction of the EBA mixed regional economy (with transhumance), see Tab. 16.

Chapter Summary and Conclusion

The assemblage from Platia Magoula Zarkou resembles animal breeding in big man societies for the following three reasons. Firstly, among big man societies pigs were an important item for regional exchanges and alliances, and young pigs were never killed but were left alive for longer. The same can be observed for Platia Magoula Zarkou, where the majority of sheep were slaughtered only after two years of age, in contrast to the slaughter of young sheep and goats below one year of age at Çukuriçi Höyük. Secondly, the presence of enclosure walls does not necessarily correspond to centralized, but also to non-centralized societies. Drawing from the rich evidence concerning enclosure walls from Papua New Guinea's big man tribal societies, the enclosure at Platia Magoula Zarkou does not demonstrate a clear difference

¹¹⁵⁷ Rappaport 2000 [1968]; Lederman 2015.

EARLY BRONZE AGE MIXED REGIONAL TRANSHUMANCE ECONOMY					
Hunting	Gathering, collecting	Animal herding	Plant cultivation	Crafts	Regional economies
Big game: aurochs, red deer Small animals: foxes (no cutting marks), badgers, wild cats (no cutting marks), hares	River mussels, a single cockle shell from the Aegean Sea, no fish remains	Sheep, goats, cattle, pigs, dogs Sheep:goat ratio of 3:1	Barley, bitter vetch, emmer	Textile production, including wool items	Obsidian exchange, a single cockle shell from the Aegean Sea
Targeted hunting of aurochs and red deer		The primary importance of sheep and goats, plowing with cattle, evidence for the utilization of secondary products	Small botanical record (only five seeds) but evidence for plow agriculture	Intensification of textile production	Trade within the Thessalian plain and the Aegean world, no evidence for trade with the Near East
The exploitation of wild animals integrated into the mixed farming economy (as a risk-buffering strategy, the negotiation of power relations, and possibly commodity exchange)		Agriculture (cultivation of domesticated plants in fields with usage of animal and animal labor for draft, plowing, and manure)		Part of the DMP	Inter-regional exchange of commodity items

Tab. 16 Model of mixed regional economy at Platia Magoula Zarkou during the EBA (with transhumance)

between the upper and lower mound settlement plan. This provides no evidence for administrative mechanisms, which corresponds to the ethnographic cases from Papua New Guinea. Thirdly, the animal assemblage from Platia Magoula Zarkou indicates that hunting, though playing a marginal role in subsistence, remained significant during the EBA.

The difference in labour organization becomes evident when combining animal herding with craft activities. Dwellers at Çukuriçi Höyük spent less time on breeding sheep and producing wool, which therefore must have been acquired from elsewhere, and instead specialized in metal production. At Platia Magoula Zarkou, in the absence of metalworking, dwellers used more of their time and labour for sheep breeding and the production of wool and woollen items. In contrast to the locally produced wool, dwellers at Platia Magoula Zarkou relied on importing flint and obsidian stone tools, as well as metal tools, from outside. This evidence points not only to differences between a coastal site such as Çukuriçi Höyük and a hinterland site such as Platia Magoula Zarkou, but also to different types of labour organization and regional economies. Whereas locally produced wool or woollen items served as exchange items for the procurement of goods from the outside at Platia Magoula Zarkou, the same was the case for metal objects at Çukuriçi Höyük. This remains possible, despite the fact that most dwellers at Thessalian plain sites during the EBA produced wool locally. For example, among big man societies in the Papua New Guinea lowlands, each household owned pigs, but these were mobilized for the construction of regional exchange networks and household-based representations of wealth.¹¹⁵⁸

In a strictly temporal context, the assemblage from Platia Magoula Zarkou is almost contemporaneous with the western Anatolian EBA 2 cattle culture, the period during which cattle became the predominant item of subsistence. During this time, the western Anatolian sites

¹¹⁵⁸ Lederman 2015.

became divided into upper and lower towns, with attested chiefly buildings. Although similar evidence is missing for the Thessalian plain, enclosures were detected at Argissa and Pe-vkakia – however, caprines remained predominant at these sites. It appears evident that the stronger reliance on cattle breeding in western Anatolia was inherently linked to increasing social inequality during EBA 2 and a stronger regional competition for wealth. However, the assemblage being examined provides evidence for the possibility that in the Thessalian plain competitive sheep breeding was contemporaneous to the western Anatolian Bronze Age ‘cattle culture’. In both cases, Platia Magoula Zarkou and Çukuriçi Höyük fall outside the ‘cattle culture’ category. At both sites, caprines, rather than cattle, predominated in the archaeological record. This implies that the predominant consumption and most likely also the herding of these animals was tied to a household, given that a large majority of animals were slaughtered young, below 3 years of age. Thus we cannot expect that in the case of Platia Magoula Zarkou, sheep breeding was solely for subsistence and not for regional consumption – and possibly even for regional competition – since dwellers at Platia Magoula Zarkou slaughtered sheep later than their predecessors during the Neolithic.

VI. The Creation and the Reproduction of Asymmetric Relations: Household Organization and Regional Exchange on the Thessalian Plain in the Late Neolithic and the EBA

‘Socio-political contradictions are realized spatially ... spatial contradictions ‘express’ conflicts between socio-political interests and forces; it is only *in* space that such conflicts come effectively into play, and in doing they become contradictions *of* space.’

Henri Lefebvre¹¹⁵⁹

Introduction

Following the EBA and Neolithic overview of subsistence practices, this chapter aims at addressing households, household organization, and the socio-political structure during the Late Neolithic at Platia Magoula Zarkou through an exceptional find – a house model – as well as local and regional exchange networks, based on pottery, chert, and obsidian exchange. The question of households will be addressed in four steps through discussions of: i) a house model, ii) contrasting roles of women in different matrilineal societies, iii) the evidence of a mixed regional economy at Neolithic Platia Magoula Zarkou, and iv) Thessalian evidence for pottery exchange. But why do we need to discuss gender or different roles that women played in matrilineal societies in order to understand households at Neolithic Platia Magoula Zarkou? The answer to this question lies in the material itself, namely the miniature of the Neolithic house model found at the site. Exceptional objects such as this house model excavated at Platia Magoula Zarkou or other more widely known Neolithic figurines represent those types of archaeological finds often held to be very suitable for the construction, support, or refutation of metanarratives not necessarily supported through substantial ethnographic evidence. In this chapter, I will mainly focus on one such metanarrative or new theoretical construction, namely *cooperative affluent societies*.¹¹⁶⁰ I will provide a counter-explanation to this claim, and challenge its conclusions by outlining different roles of women in matrilineal societies as documented ethnographically.

This chapter shows that already during the Late Neolithic in the Thessalian plain, households developed social and economic relations with other households inside their settlements and elsewhere in the region. While the pooling of local resources within households again might have been the main subsistence strategy, these settlements, and consequently households *a priori*, were embedded and entangled in regional exchange and social networks that were part and parcel of wider regional economies. Regarding the concept of ‘original affluent societies’,¹¹⁶¹ it remains difficult to support its crucial hypotheses about leading roles of women within and outside households at Platia Magoula Zarkou. As I will show, this house model may not have provided a depiction of reality but instead an ‘anti-structure’¹¹⁶² or an inverse symbolic reality. Anthropological insights into the house model therefore support the

¹¹⁵⁹ Lefebvre 1991 [1974], 365.

¹¹⁶⁰ Risch 2018.

¹¹⁶¹ Risch 2018.

¹¹⁶² Turner 2009 [1969].

more probable interpretation that women saw themselves and were appreciated by others as the ‘centre of the house’ in a local, patrilineal context. After all, female objects such as pottery could have served as important every day, on-site items, as well as an important item for a regional gift, barter, or even marital exchange, as shown in the last section of the chapter.

The following focuses on households at Platia Magoula Zarkou and the broader region of Thessaly, anchored in the Late Neolithic rather than the Early Bronze Age time frame. There are three reasons why I look at the Late Neolithic period rather than Early Bronze Age households at Platia Magoula Zarkou. The first reason is empirical. Since the start of the project, I have understood that Platia Magoula Zarkou is known within prehistoric archaeology for its ‘open house’ model. The model is a unique find in that it provides both a house model and associated anthropomorphic figurines placed within the house, within a single undisturbed context.¹¹⁶³ Therefore, I decided to address households as sites of comparison, rather than being limited to analysing more or less contemporaneous archaeological material dating to the Early Bronze Age. The house model at Platia Magoula Zarkou provides an important window into the ‘nesting’ within a shared Late Neolithic house, the interpretations of which can be disrupted and further contextualized through socio-anthropological insights.

The second reason for looking at the Late Neolithic instead of the Early Bronze Age at Platia Magoula Zarkou is theoretical. The interpretation of the Late Neolithic house model at Platia Magoula Zarkou has recently been used to contextualize ‘cooperative affluent societies’¹¹⁶⁴ from prehistoric archaeological data. Roberto Risch intentionally coined this concept ‘*without anthropology*’¹¹⁶⁵ since, as he claims, ‘most a-cephalic societies identified by anthropology are described as being poor in absolute (material) terms, but rich in time for leisure or other activities.’¹¹⁶⁶ Risch characterized the ‘cooperative affluent societies’ as those in which surplus production did not lead to the emergence of social inequality. The house model at Platia Magoula Zarkou was interpreted as an indicator of a ‘cooperative affluent society’, in which women played an active role in the economic and political realms.¹¹⁶⁷ Here, I aim to contribute to a theoretical model of cooperative affluent societies with anthropology, instead of without, and to show that societies in which considerable surplus production did not lead to the emergence of hereditary social inequality have also been documented ethnographically.

The third reason for taking into account the Late Neolithic period at Platia Magoula Zarkou is practical. The Late Neolithic period at Platia Magoula Zarkou has been thoroughly studied through ceramic petrography and stone tools, and as such provided particularly interesting results, suitable for anthropological contextualization. Meanwhile, the Bronze Age layers of pottery at Platia Magoula Zarkou are still being analysed due to unforeseen circumstances, and are therefore beyond my reach at the current state of research. The interrelationship between these three reasons – empirical, theoretical, and practical – for looking at Late Neolithic instead of Early Bronze Age households at Platia Magoula Zarkou allows me to question whether the woman’s central role within a household necessarily implies matrilineal social organization and women’s leading political roles outside the household, as recently proposed by Risch.

¹¹⁶³ Both zoomorphic/anthropomorphic figurines and house models are common finds for the Neolithic period in the wider region of the Aegean basin and eastern Anatolia, including Thessaly (Nanoglou 2005; Nanoglou 2006; Alram Stern 2017). However, house models and figurines are generally found in separate contexts. A house model containing anthropomorphic figurines within a single, undisturbed context has so far been discovered only at Late Neolithic Platia Magoula Zarkou and at Neolithic-Eneolithic period Ghelăiești (3700–3500 BC) in the Cucuteni-Tripolye culture area in today’s Romania (Alram-Stern 2022).

¹¹⁶⁴ Risch 2018.

¹¹⁶⁵ Risch 2018, 48, italics in original.

¹¹⁶⁶ Risch 2018, 45. For a review of acephalous sedentary societies in contemporary socio-cultural anthropology, see Chapter II. According to my understanding, Risch’s statement broadly refers to the study of hunter-gatherer societies, but since the 1970s anthropologists have shown that acephalous, affluent societies (in material terms as well as in terms of leisure time) also existed in rich ecological environments.

¹¹⁶⁷ Risch 2018.

The chapter is divided into four parts. Firstly, it summarizes the contexts of the Late Neolithic occupation at Platia Magoula Zarkou, centred on the house model, which has already been interpreted by many scholars. The second part of this chapter demonstrates the multiplicity of male and female roles in both acephalous and non-acephalous matrilineal societies, within and outside the household. These insights are also relevant for an understanding of prehistoric realities, including the one modelled in clay at Platia Magoula Zarkou. As the site was a regional production centre for grey on grey pottery during the Late Neolithic, the third part of the chapter contextualizes potential ways of production and distribution of handmade pottery at Platia Magoula Zarkou through ethnographic observations among Wanigelan female potters in Papua New Guinea. Wanigelans are a representative case of big man societies, which fall outside the ‘evolutionary sequence’ of societies with an elaborate division of labour and high productivity, including a considerable amount of surplus production, yet without a hereditary hierarchical and centralized political organization. The fourth part contextualizes pottery production at Platia Magoula Zarkou alongside the results from stone tool analyses, and shows that at least two spheres of exchange¹¹⁶⁸ existed at Late Neolithic Platia Magoula Zarkou. Moreover, the chapter provides anthropological evidence for ‘affluent cooperative societies’¹¹⁶⁹ that have previously been documented ethnographically, including the big man societies in Melanesia. As a result, this chapter demonstrates that the modelling of prehistoric societies should remain intertwined with anthropological insights rather than being isolated from them, to prevent the re-creation of socio-political models that might already be known to one discipline or another, and to maintain a careful analytical distinction of what it means to have a central role within or outside the house.

VI.1. Multiple Interpretations of the House Model

As I will show in this section, the house model at Platia Magoula Zarkou has so far generated multiple interpretations. These include an interpretation of the house model through ritual symbolism,¹¹⁷⁰ house societies,¹¹⁷¹ and most recently, as the supporting feature for *cooperative affluent societies*.¹¹⁷² The latter, I will examine somewhat more closely. I challenge the interpretation of women being the leading figures within and outside houses at Platia Magoula Zarkou. As I argue in this section, there is no reason that we need to speculate whether the house model necessarily depicted emic reality. Did Neolithic women have beak-like noses? It seems unlikely, as much as it is unlikely that women were indeed taller than men. Therefore, instead of using this archaeological find – a miniature – as necessarily depicting the realities of the outside world, I propose an alternative interpretation. The house model represents a so-called symbolic ‘anti-structure’,¹¹⁷³ depicting an inverse picture of reality. Due to its deposition buried underground, it should be considered as a sacred object, excluded from barter and exchange, but transmitted through generations by being kept underneath the house floors. The message this section then proposes is not to avoid ‘religious’ or precious objects such as the house model in our interpretation. On the contrary, we need to challenge theory-biased interpretations of such depictions by asking what these ‘extraordinary objects’ represent. By asking this question, we can avoid new or re-invigorated master narratives that lack any solid basis since they are elaborated ‘without anthropology’.¹¹⁷⁴

¹¹⁶⁸ Bohannan 1959.

¹¹⁶⁹ Risch 2018.

¹¹⁷⁰ Gallis 1985.

¹¹⁷¹ Borić 2008.

¹¹⁷² Risch 2018.

¹¹⁷³ Turner 2009 [1969].

¹¹⁷⁴ Risch 2018.



Fig. 30 The Neolithic house model found at Platia Magoula Zarkou (after Alram-Stern 2022, fig. VI.27–37a)

Platia Magoula Zarkou is well known in the prehistoric archaeological community as the site where a house model made of baked clay figurines was discovered in 1983¹¹⁷⁵ (see Figs. 30 and 31). The model was deposited during the Middle Neolithic Phase VII, right underneath the Late Neolithic Floor (dating to Phase VII), on top of an ash layer, next to two hearths, in what was possibly an open area.¹¹⁷⁶ The unroofed clay house model comprises walls surrounding a rectangular floor, with an entrance in front and an oblong object in the centre back (possibly a grinder),¹¹⁷⁷ which divides the house into left and right parts¹¹⁷⁸ and separates groups of anthropomorphic figurines. Within the house walls, the groups of male and female figurines are divided into three groups: there are (1) several large figurines (male and female) on the left side of the house; (2) some medium-sized figurines (male and female) with what appear to be a child and a baby in the front-right corner; and (3) a few even smaller, possibly female figurines in the back-right corner of the house.¹¹⁷⁹ In both cases where figurines included male/female adult couples (1 and 2), on the left side and in the front-right corner, the females are much larger than the males (see Figs. 30 and 31).

Another important set of finds dates from the Tsangli-Larissa phase at Platia Magoula Zarkou. This comprises a cemetery with 60 cremation burials deposited in urns, 300m north of the settlement.¹¹⁸⁰ A fire-pit for the cremation of dead bodies was also found in this cemetery. Following cremation, only specific parts of each skeleton such as the limbs and skulls were

¹¹⁷⁵ Gallis 1985.

¹¹⁷⁶ Gallis 1985; Alram-Stern 2022.

¹¹⁷⁷ Gallis, 1990, 17; Risch 2018, 54; Alram-Stern 2022.

¹¹⁷⁸ For the house model from Platia Magoula Zarkou, archaeologists are unable to determine geographical directions (E. Alram-Stern, pers. comm. 2020). Therefore, the positions are described according to the viewer: front and back, left and right.

¹¹⁷⁹ Alram-Stern 2022; Alram-Stern in press.

¹¹⁸⁰ Gallis 1982, 64–134; Pentedeka 2011.

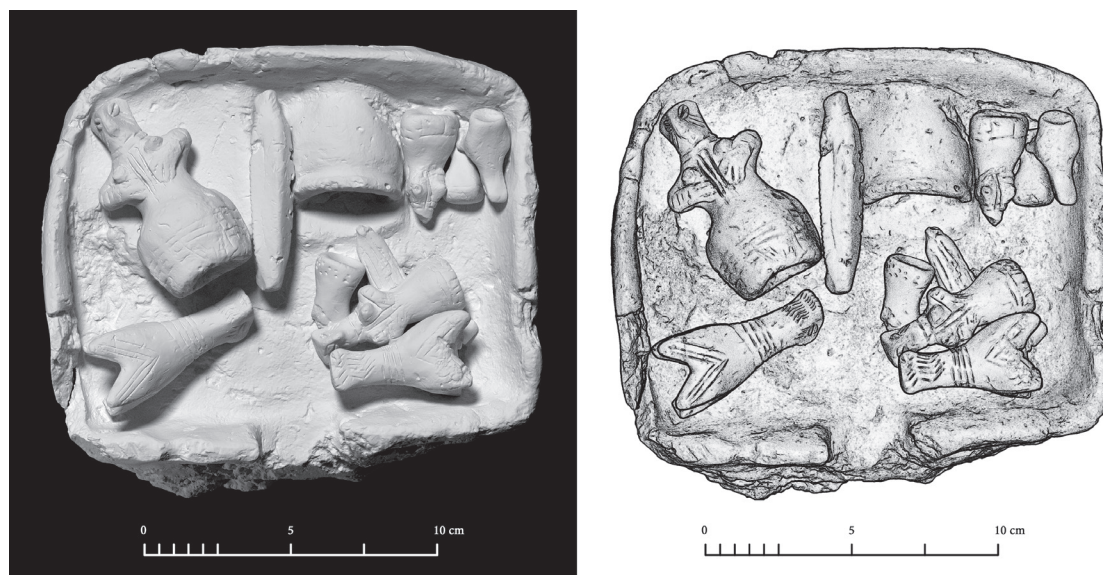


Fig. 31 3D scan of the Neolithic house model found at Platia Magoula Zarkou (after Alram-Stern 2022, fig. VI.27–37c)

deposited in the urns and buried in a shallow pit. No grave goods were found inside or close to these urns, other than small red-coloured pottery sherds. The explanation for this homogeneous burial practice has been interpreted as either an indicator that Late Neolithic dwellers at Platia Magoula Zarkou lacked intra-group differentiation, or that intra-group differentiation was not reflected in their mortuary practices.¹¹⁸¹ The first interpretation, suggesting a lack of intra-site differentiation, can be refuted through the material evidence of the house model, which clearly depicts internal differences based on gender (male and female) and age (young and old), if not rank or status (see Figs. 30 and 31). Moreover, dwellers at Platia Magoula Zarkou most likely also distinguished between the unequal skills and rights that adult members of a household or a village possessed, as will be discussed below.

Apart from differentiation by age, gender, and possibly status among the figurines found in the house model at Platia Magoula Zarkou, differentiation in terms of personal skills can be best observed from local pottery production. Based on petrographic¹¹⁸² and chemical analyses, most of the Late Neolithic pottery found at Platia Magoula Zarkou from the Tsangli-Larissa phase was made from local clay sources, and only a few pots could be identified as being of non-local origin.¹¹⁸³ The production of grey on grey pottery was unique to Platia Magoula Zarkou during this phase. Therefore the site was identified as the major regional production centre of grey on grey pottery among other regional production centres of different types of wares on the Thessalian plain. The regional specialization in pottery production appears to be a complementary system, in which other regional sites such as Makrychori 2 and Magoula Tsalma, two hinterland eastern Thessalian sites, specialized in the production of black burnished wares, Tsangli specialized in the production of scraped ware, and Halki 1 specialized in the production of red-on-white ware, these not being produced at Platia Magoula Zarkou or elsewhere in the region.¹¹⁸⁴ Grey on grey pottery from Platia Magoula Zarkou reached many

¹¹⁸¹ Fowler 2004, 63–64; Pentedeka 2011.

¹¹⁸² Ceramic petrography is a laboratory-based archaeological technique that examines the mineral composition of ceramics and other inorganic materials. Based on petrographic analyses, it is possible to understand the provenance of clay pastes and the technology of archaeological artefacts.

¹¹⁸³ Pentedeka 2011.

¹¹⁸⁴ Pentedeka 2017, 145.

sites in Thessaly, but visually indistinguishable pots were produced from at least three different clay recipes (composition of physical ingredients) at Platia Magoula Zarkou, which has been interpreted as a possible indicator of ‘expressing tensions within the community’.¹¹⁸⁵

Complementary to this interpretation, it appears very likely that the evidence for the three different clay recipes for the same type of pots produced at Platia Magoula Zarkou also points towards the differentiated professional socialization of potters at the site. It seems likely that potters at Platia Magoula Zarkou learned potting skills within different households, and therefore used and transmitted different clay recipes. Accustomed to a particular clay recipe through the repetitive practice of pottery production, the potters transmitted their particular knowledge to the succeeding generation within the household. Through repetitive practice, potters reproduced the pre-existing networks of social relations between and within households. They preserved and safeguarded the knowledge of a household-specific or several households-specific clay recipe(s). This facilitated access to and claim upon the required, particular clay sources off-site, by which they could internally compete for advantages in external exchange with the purpose of acquiring goods from outside. The existence of household-based and household-specific clay recipes at Late Neolithic Platia Magoula Zarkou can be further supported through the house model and the associated figurines since all of the items in this house model were made of the same clay paste.¹¹⁸⁶

Several scholars have offered an interpretation of the house model at Platia Magoula Zarkou. Initially, the house model’s deposition was interpreted as part of a foundation ritual for a house, as part of which the house model was placed under the house floor.¹¹⁸⁷ Recently, Alram-Stern proposed an alternative interpretation in line with Tringham and Chapman’s¹¹⁸⁸ interpretation that the house models, including the one at Platia Magoula Zarkou, were most likely buried with the house after it was no longer in use, or even as a replacement for the intramural burial (at Platia Magoula Zarkou not within a house, but in an open space).¹¹⁸⁹ Despite these conflicting interpretations, scholars agree that the model is thought to resemble the internal organization of the physical and social house at Late Neolithic Platia Magoula Zarkou.¹¹⁹⁰

The figurines in this house model are of visibly different sizes, which could correspond to the approximate age of each person. The larger figurines, supposedly representing adults, are clearly gendered (females are depicted with breasts and males without them, but sitting on a stool), coupled (males and females are placed closely together as a unit, with or without children), and differentiated through repetitive decorative patterns sculpted onto the female or male figures respectively. Despite the stylistic differences between the figurines, the house model and all of the figurines were made of the same clay.¹¹⁹¹ Therefore, the model provides ample material evidence for the grouping or nesting of household segments within the Late Neolithic house at Platia Magoula Zarkou. These included nested dichotomies of gender, age and possibly rank between members of the same house.

In the house model, men were depicted wearing more necklaces than women, and the largest man in the house was decorated with dots from neck to chest, representing jewellery, which was not found on the women.¹¹⁹² Recognizing that the model was constructed by dwellers at the site, it seems likely that the house model therefore represents an emic depiction of a household during the Late Neolithic, in the so-called Tsangli-Larissa phase at Platia Magoula

¹¹⁸⁵ Pentedeka 2017, 150.

¹¹⁸⁶ Alram-Stern 2022.

¹¹⁸⁷ Gallis 1985; Risch 2018.

¹¹⁸⁸ Tringham – Chapman 2005.

¹¹⁸⁹ Alram-Stern 2022.

¹¹⁹⁰ Gallis 1985; Borić 2008; Risch 2018; Alram-Stern 2022.

¹¹⁹¹ Alram-Stern 2022.

¹¹⁹² Alram-Stern 2022.

Zarkou. Based on the stylistic differences in figurines found in other Late Neolithic sites (without the associated house model), a similar argument has already been put forward for the Neolithic site of Aegina, in which ‘most of the figurines from this context actually were shaped to represent the generic inhabitants of the village’.¹¹⁹³ Alram-Stern recently proposed that this household model represents an extended family linked by kinship and non-kinship ties.¹¹⁹⁴ According to her recent interpretation, the household included two groups of members: those related through kinship (an older couple in the left part and a younger couple with two children in the front-right corner) and a group of unrelated women with lower social status, linked to the household through household activities, positioned in the back-right corner.¹¹⁹⁵

Gender Relations in ‘Cooperative Affluent Societies’

The Late Neolithic house model also provides an important insight into gender relations within a household unit, based on the spatial proximity of and distance between couples. Each of the two couples, consisting of a male and a female figurine with or without a baby, was spatially segregated from another couple by either an object (in the shape of an enlarged mortar) or a larger empty space between them. The spatially segregated units, most likely comprising three generations, appear as one unit laid down within a shared house. In each adult couple, women are represented as much larger in size than men, although this is unlikely to reflect the situation on the ground: as Risch put it, the larger size of the female and the smaller size of male persons within the house model ‘ignores the mean biological differences between the two sexes’.¹¹⁹⁶ Risch argued that this representation ‘seems to underline the social position and authority of women within the community’.¹¹⁹⁷ However, assuming that the figurines are intentionally placed within the house model, it seems to symbolically emphasize something else, which may be identified as adult married females’ status and authority within their domestic unit. Risch leaves out the question of age (young and old) and status (married and unmarried) and without this consideration concludes that the depiction of larger females provides evidence for female authority within the community. Instead, I agree with other scholars¹¹⁹⁸ who proposed that the evidence here relates to individual households rather than the community as a whole.

Since women in all societies are, on average, physically shorter than men, this raises the question of why women in this house model were depicted as being considerably larger than men. Alram-Stern¹¹⁹⁹ has briefly challenged the possibility that the larger female figurines depict a matriarchal vision of Neolithic society at Platia Magoula Zarkou. Alram-Stern¹²⁰⁰ argued in line with Bourdieu’s conceptualization of Berber houses. She maintained that the larger size of the women within the house model depicts women at Platia Magoula Zarkou as being inherently linked to activities such as food preparation and the upbringing of children within the house.¹²⁰¹ Their position and larger size within the house emphasizes women’s stronger relationship to domestic space, whereas the smaller size of the men and their location closer to the doors indicates the male connection to the outside world and their lesser importance within the house.¹²⁰² This interpretation emphatically refutes the argument proposed by Roberto Risch,

¹¹⁹³ Alram Stern 2017, 410.

¹¹⁹⁴ Alram-Stern 2022.

¹¹⁹⁵ Alram-Stern 2022.

¹¹⁹⁶ Risch 2018, 56.

¹¹⁹⁷ Risch 2018, 56.

¹¹⁹⁸ Alram-Stern 2022.

¹¹⁹⁹ Alram-Stern 2022.

¹²⁰⁰ Alram-Stern 2022.

¹²⁰¹ For the proposal that depictions of bodies in Thessalian Neolithic are characterized according to their actions rather than their ‘gender role’, see Nanoglou 2010.

¹²⁰² Alram-Stern 2022.

who promoted a quasi-matriarchal socio-political organization of the Neolithic in the Aegean, Iberia, and the region of Northern Mesopotamia and Syria. Although the matriarchal view of the Aegean and Balkan Neolithic is most commonly ascribed to Marija Gimbutas, in her later work Gimbutas proposed that *gylany*, a ‘balanced, nonpatriarchal and nonmatriarchal social system’¹²⁰³ with elements of matrilineal system characterized ancient Greece, Etruria, Rome, the Basque, and other countries of Europe.

The house model from Platia Magoula Zarkou was previously also used as an example of the emergence of house society¹²⁰⁴ social organization during the Old World Neolithic.¹²⁰⁵ According to Borić, the house society social organization can be found in societies where ‘the house as a collective entity takes over the role of controlling and disciplining its members and directing interactions with other individuals belonging to other ‘houses’ within a community or even in relation to people inhabiting other nearby or distant settlements.’¹²⁰⁶ While Borić’s interpretation appears applicable to the house model at Platia Magoula Zarkou, from his definition we learn very little about who disciplined whom within the house in these so-called house societies. Recently, Risch¹²⁰⁷ used this approach to develop the political form of *affluent cooperative societies*, applicable to and inferred from the later prehistoric record in Iberia, the Balkan Peninsula, and the Near East. He proposed that in these affluent cooperative societies, ‘substantial material benefits were shared and enjoyed collectively’¹²⁰⁸ and ‘the act of sharing and circulating elaborate and often unique goods was the focus of political practice, in which *women might have been leading figures*’.¹²⁰⁹ He proposed that ‘their merit, it seems, was to have succeeded setting a surplus economy into motion through a combination of individual creativity, cooperative work, and collective decision-making, which benefitted the community as a whole.’¹²¹⁰ Moreover, Risch argued that these societies could have been organized along matrilineal lines of descent,¹²¹¹ which would necessarily allow women to take up the leading political roles.

Risch’s argument contrasts with the recent anthropological contextualization of more or less sedentary prehistoric communities in prehistoric Asia Minor¹²¹² and my own view (see Chapter III). For the present discussion, it is important to emphasize that dwellers at Platia Magoula Zarkou practised a mixed (largely or partially sedentary) regional economy during the Late Neolithic period (see Chapter V). Furthermore, this regional economy included herding large domestic animals such as cattle, sheep, goats, and pigs; growing crops; collecting river mussels; craft activities, such as the production of grey on grey pottery for local and regional distribution; and participation in the long-distance, regional exchange of obsidian, chocolate chert, and grey on grey pottery across the Thessalian plain. Considering that keeping cattle and matrilineal descent are negatively correlated and that matrilineal descent is usually lost after a matrilineal group adopts cattle,¹²¹³ it is, then, highly improbable that dwellers at Platia Magoula Zarkou were organized on the basis of matrilineal descent. Moreover,

¹²⁰³ Gimbutas 1989, xx.

¹²⁰⁴ For the development of the ‘household society’ or the so-called ‘*Sociétés à maison*’ (in original) (Lévi-Strauss 1982) model of social organization within socio-cultural anthropology (and consequently (pre)historic archaeology), see Chapter IV. Although the model of house society social organization stems from the late neostructural reasoning (Lévi-Strauss 1982; Carsten – Hugh-Jones 1995), decisive elements are systematically and necessarily lacking in the concept of house society.

¹²⁰⁵ Borić 2008.

¹²⁰⁶ Borić 2008, 132.

¹²⁰⁷ Risch 2018.

¹²⁰⁸ Risch 2018, 45.

¹²⁰⁹ Risch 2018, 55, italics mine.

¹²¹⁰ Risch 2018, 60.

¹²¹¹ R. Risch, pers. comm. 2019.

¹²¹² Gingrich – Schweitzer 2014.

¹²¹³ Holden – Mace 2003.

the house model at Platia Magoula Zarkou represents an extended family residing in a small house. This does not represent a larger floor plan including multiple groups linked through matrilineal descent residing within the same ‘longhouse’, which is more typical for matrilineal and matrilocal societies.¹²¹⁴ Patrilineal descent among dwellers at Late Neolithic Platia Magoula Zarkou is therefore much more likely.

Alternatively, the house model at Platia Magoula Zarkou can also be seen from the maker’s perspective, focusing on the projections and agency that were translated into the figurines through the potters’ hands. Tringham and Conkey have proposed a similar approach for the study and interpretation of prehistoric figurines, calling for the study of these items in terms of gender ideology and the negotiation of power relations between men and women. This approach is critical of the assumption of peaceful coexistence between men and women in prehistory.¹²¹⁵ It differs starkly from Risch,¹²¹⁶ who not only argued for peaceful relations between men and women within affluent cooperative societies, but also ascribed a leading position to women not only within the house but also in economic and political realms outside the house, indicating a matriarchal rather than merely matrilineal social reality. I partially agree with Tringham and Conkey,¹²¹⁷ whose critical assessment of men’s and women’s roles assumed peaceful coexistence in prehistory, which more or less corresponds to solid ethnographic documentation. In fact, ethnographic evidence for groups with ‘egalitarian’ gender relations constitutes a marginal proportion within the Ethnographic Atlas,¹²¹⁸ and mostly concerns mobile hunter-gatherer groups. Some of the more or less sedentary groups with comparatively balanced gender relations include the Hopi and the Navaho¹²¹⁹ who, like other matrilineal groups with balanced gender relations, lacked cattle, instead herding sheep and goats. However, matrilineal descent does not necessarily imply balanced gender relations, a point which will be discussed further below.

Considering the ethnographic evidence regarding non-wheel pottery production, most potters, regardless of the level of socio-political organization, were women. The production of non-wheel pottery also often overlaps with breadmaking – including cereal grinding, the preparation of dough, and baking – in which women maintain household-specific recipes for both bread and pottery. If female production of non-wheel pottery holds true through cross-cultural ethnographic examples, then we can also postulate that women also sculpted pottery, including the house model, at Platia Magoula Zarkou.¹²²⁰ It would be reasonable to argue that female potters then not only depicted an emic reality, but that they intentionally symbolically exaggerated the size of women and lessened the size of men. The larger size of women does not then directly imply that women were physically much larger and taller than men. It also does not necessarily indicate that female positions were politically or economically more powerful than men outside the house, as there is no material evidence of women being depicted outside the house, nor ethnographic evidence to support such a claim under these specific conditions (e.g. cattle herding included in a mixed regional economy). Instead, complementary to the understanding of the house model from Platia Magoula Zarkou as an emic reality, I argue that the house model simultaneously portrays an imaginary and symbolic reality, moulded in clay,

¹²¹⁴ Ember 1973; Divale 1977; Ensor 2013.

¹²¹⁵ Tringham – Conkey 1998.

¹²¹⁶ Risch 2018.

¹²¹⁷ Tringham – Conkey 1998.

¹²¹⁸ Murdock 1967.

¹²¹⁹ Schlegel 1986.

¹²²⁰ Cross-cultural study has shown that in societies with simple or extensive agriculture pottery making tends to be performed by females whereas with the increasing intensity of agriculture pottery making tends to be assigned to males (Murdock – Provost 1973).

which can be further supported by the beak-like depiction of the figurines' noses, as described by Alram-Stern.¹²²¹

The house model at Platia Magoula Zarkou is an idealized object through which to discuss things that are neither gifted nor bartered, but transmitted. Following Godelier, the house model was deliberately excluded from exchange, and can therefore be classified as a sacred object, 'since it is the things we do not give [that] are often those we consider to be the most sacred'.¹²²² The house model's ritual and sacred associations at Platia Magoula Zarkou were also proposed by other archaeologists,¹²²³ which is crucial for the analysis of gender relations depicted in the house model. The house model was hidden below the floor, in an open area on top of the Late Neolithic *magoula*, in a public 'ritual deposition'. The main point is that symbolic figurines from Platia Magoula Zarkou may depict the hidden inverse of the reality on the ground, regardless of whether it was a foundation ritual or a marker of a buried house. This inverse reality, which is common in rites of passage (which may include the foundation¹²²⁴ or burying of a house¹²²⁵ at Platia Magoula Zarkou), is described by Victor Turner¹²²⁶ as an 'anti-structure'. He described the phenomena of ritual anti-structure through the well-known case of the Ndembu in Zimbabwe, in which the crown-elect takes on the role of a commoner before assuming control. Therefore, the house model from Platia Magoula Zarkou cannot be considered only as an emic depiction of reality on the ground, but must simultaneously be understood as a material version of the so-called anti-structure, which provides a liminal and existential revolt against the structure. Based on these multiple lines of evidence, it is therefore not possible to understand the larger depiction of women as a necessary indicator of matrilineal or matriarchal social realities at Platia Magoula Zarkou, as Risch proposed. As I will show below, matrilineal characteristics do not necessarily grant a leading socio-political role to women either within or outside the house and, moreover, having women as the 'centre of the house' is equally compatible with both patrilineal and matrilineal societies.

VI.2. Contrasting Roles of Women and Men in Different Matrilineal Societies

Roberto Risch's claim that in cooperative affluent societies, women occupied leading positions both within and outside the house¹²²⁷ has been considered critically. In this chapter I will challenge his conclusion through different ethnographic cases of matrilineal societies. I will show that matrilineal societies may or may not be centralized. In decentralized cases, it is women who own the household means of production, yet it is not women but a council of elderly men and women, who take important socio-political decisions regarding the whole community. This is the first point where Risch's conclusions¹²²⁸ run into a grave problem, since in his model he also ascribes the leading position of women to the political sphere. This implies a sort of female political superiority within a decentralized setting, rather than considering more 'egalitarian' decision making through the male and female council of elders. The second point that I highlight in this chapter is that within matrilineal societies households may or may not be headed by women and that matrilineal societies may or may not give political power to women. Based on this, I propose an interpretation of the house model as an anti-structure that

¹²²¹ Alram-Stern 2022.

¹²²² Godelier 2011, 430.

¹²²³ Gallis 1985; Alram-Stern 2022.

¹²²⁴ Gallis 1985.

¹²²⁵ Alram-Stern 2022.

¹²²⁶ Turner 2009 [1969].

¹²²⁷ Risch 2018.

¹²²⁸ Risch 2018.

may possibly entail a symbolic ‘act of resistance’.¹²²⁹ The model could also represent a context in which women saw themselves and were appreciated by others as the ‘centre of the house’ within a patrilineal context. In this case, houses would be primarily female spaces and were perceived as such by both female and male dwellers at Late Neolithic Platia Magoula Zarkou.

Let us consider Risch’s proposal that dwellers at Platia Magoula Zarkou were organized along matrilineal lines of descent. With reference to socio-cultural anthropological knowledge, matrilineal descent does not necessarily imply a leading position for women either within or outside the house in all cases. In matrilineal societies, immovable property (a house, or land) can often be transmitted to women and movable property (stock, tools, etc.) to men (e.g. their brothers belonging to the same matrilineal group), which shows a rather ‘egalitarian’ relationship between men and women.¹²³⁰ This can be said without any assumption that politico-religious power (e.g. a spiritual leader) is necessarily more important than other forms of power (e.g. ownership of the means of production). Among sedentary groups, a gendered division of labour commonly becomes more institutionalized, with female activities being associated with the domestic sphere and male activities with the public sphere. More often than not, ‘this pattern leads to inequality in social power between the sexes, where male economic control or political activities puts them into the principle of decision-making roles.’¹²³¹ Yet, as argued above, women’s access to property is of key importance for more balanced gender relations among sedentary groups.

Anthropological insights into matrilineal societies can be drawn from multiple ethnographic examples. These include Trobriand chiefdoms,¹²³² Akan,¹²³³ Hopi,¹²³⁴ the Nayars of Kerala,¹²³⁵ the Minangkabu,¹²³⁶ and some coastal Greek communities,¹²³⁷ among others. Although matrilineal descent was common to all these societies, the roles of women and men in these societies differed widely. Therefore I provide below a synthesis of the different roles of women and men in different matrilineal societies with reference to political centralization, household organization, and female political participation.

Matrilineal Societies May or May Not Be Centralized

Matrilineal societies, like patrilineal ones, may differ widely in their political centralization. In order to demonstrate this, I chose two representative examples from either side of the (de) centralized continuum – the non-centralized or acephalous Hopi,¹²³⁸ and the centralized Trobriand chiefdom.¹²³⁹ The matrilineal Hopi followed a matrilineal residence pattern in which the house, associated household items, and land were owned by women. As men moved into their wife’s house after marriage, men owned stock such as sheep (and later cattle and horses, which strengthened male positions in more recent times). Whereas men were highly mobile in order to exchange locally produced goods, such as female-produced pottery, female mobility was restricted to the village (with the exception of fetching water from a local stream, located near the village). As it was women who owned the land and therefore the means of production among the Hopi, it was Hopi women who sponsored seasonal festivals. Men were in charge of

¹²²⁹ Turner 2009 [1969].

¹²³⁰ Schlegel 1973; Schlegel 1977; Schlegel 1979; Schlegel 1986.

¹²³¹ Schlegel 1986, 21.

¹²³² Malinowski 1922; Malinowski 1929; Malinowski 1935; Weiner 1976.

¹²³³ Fortes 1950.

¹²³⁴ Schlegel 1973; Schlegel 1977; Schlegel 1979; Whiteley 1985; Schlegel 1986; Schlegel 1992; Whiteley 2003.

¹²³⁵ Gough 1961.

¹²³⁶ Abdullah 1966.

¹²³⁷ Goody 1990.

¹²³⁸ Schlegel 1973; Schlegel 1977; Schlegel 1979; Schlegel 1986.

¹²³⁹ Malinowski 1929.

the religious ceremonies performed in *kivas*, warfare, and conflict resolution. The Hopi had no hereditary office, but there was a Hopi elder's council that made important decisions, which included both men and women. They have been characterized as an example of an acephalous society with 'egalitarian' relations between men and women¹²⁴⁰ (see Tab. 17).

On the other side of the (de)centralized continuum of matrilineal societies are the Trobriand chiefdoms, as described by Malinowski.¹²⁴¹ Members of matrilineal Trobriand chiefdoms followed a pattern of avunculocal residence, in which a couple resided with husband's mother's brother after marriage. Men owned the house and the associated storage house. After marriage, women moved into the man's house: thus men owned the house, but women owned household items and were in charge of daily household activities such as cooking and raising children. Men only cooked in ceremonial settings, in large pots outside the house, or on sea voyages, in the absence of women. Trobriand men commonly participated in chiefly voyages for the exchange of *kula* items and were highly mobile in comparison to women, whose mobility was, like among the Hopi, mostly restricted to the village. Trobriand chiefs, who received the biggest share of yams in a redistributive economy, sponsored seasonal festivals. Trobriand chiefly offices were hereditary among men. Although gender relations were not the main focus of Malinowski's research, it is obvious that, regardless of their rank, men enjoyed more ceremonial prestige, and were more mobile than women, and it was men and not women who occupied the highest political office in the Trobriand matrilineal chiefdom (see Tab. 17). These men operated according to their adherence to matrilineal groups as their mother's sons and their sisters' brothers.

These two examples are particularly important as they show that matrilineal societies, like patrilineal ones, can be either centralized or decentralized. In the context of decentralization, it appears to be important that women own the means of production, which was the case for the Hopi but not for the Trobriand Islanders. As Hopi society was decentralized, the women, who owned the means of production, turned the surpluses to the communal good, whereas the Trobriand male chiefs turned such festivities into a means of gaining social prestige and conducting long-distance voyages overseas to acquire *kula* prestige items from afar. Moreover, a key factor for decentralized political organization was the Hopi council, which included both male and female elders, whereas the key political decisions in the Trobriand chiefdom were made by the chief himself.

Households in Matrilineal Societies May or May Not Be Headed by a Woman

Another important distinction between matrilineal societies is the role of women inside the household, which is closely related to my main interests in connection with the house model from Platia Magoula Zarkou. The two examples of matrilineal societies, namely the Hopi and the Trobriand Island chiefdom, varied significantly as regards the degree to which decision-making powers *inside* the household lay in the hands of women, or not. For example, among the Hopi, where women owned the house and household items, the decision-making powers within the house were in women's hands: Hopi households were both owned and headed by elderly women,¹²⁴² who were responsible for upbringing, disciplining, and orienting their children, as well as making decisions about the distribution of household surpluses. This implies that key decisions related to the household, relevant to both male and female members, were made by Hopi women.

By contrast, Trobriand Island households gave power over decision-making *inside* the household to the mother's brother, rather than either the biological mother (as would be

¹²⁴⁰ Schlegel 1973; Schlegel 1977; Schlegel 1979; Schlegel 1986.

¹²⁴¹ Malinowski 1929.

¹²⁴² Schlegel 1973; Schlegel 1979.

expected, based on the Hopi example) or the biological father. In the Trobriand case, the mother's brother was responsible for the distribution of yams (household surplus) at harvest, and the upbringing, disciplining, and orienting of his sister's children. The socialization of men and women differed starkly between the Hopi and the Trobriand Islanders. From childhood into adulthood, Hopi women raised male and female members to respect and help each other. Both boys and girls went through initiation rites, through which they were socialized into their roles as men and women. Men learned to take care of the cattle and to trade in goods, whereas women were taught to 'guard' the house and care for the family, as the head of the household.¹²⁴³ By contrast, after coming of age and before marriage, Trobriand boys lived in boys' houses, which resulted in rigid gender segregation between adult men and women.¹²⁴⁴ Therefore, both the adult relations between men and women and also the upbringing and shaping of boys and girls into men and women was radically different between female-headed households among the Hopi and mother's brother-headed households among Trobriand Islanders (see Tab. 17).

Matrilineal Societies May or May Not Give Political Power to Women

Based on the two examples of the Hopi and Trobriand Island matrilineal societies, I turn to the third point in my overview. This concerns the role of women outside the house, including political participation. In the case of the Hopi, an acephalous society with comparatively balanced gender relations, elderly women actively participated in the Hopi elders' council, alongside their male counterparts. Although Hopi men were commonly involved in conflict resolution through warfare, decisions over whether to go to war or not, or when and how to sponsor religious festivals and initiations, were commonly agreed by the mixed-gender elders' councils. In those councils, it was not the hereditary office but the age status of either older men or women that allowed participation, as there was no hereditary authority within Hopi community politics.

A different situation was observed among the Trobriand Island matrilineal chiefdom. Like the Trobriand households, which were headed by a man (the mother's brother), Trobriand political office was held by a hereditary male chief. In this case, it was the male chief who sponsored the building of canoes for long-distance sea voyages to acquire *kula* prestige items, sponsored seasonal festivals, and made the important decisions about warfare and peace. In the absence of an elders' council, the male chief was responsible for major communal decisions that involved matters beyond individual households. While the Trobriand households were headed by the mother's brother, Trobriand communal political, economic, and religious decisions were made by a hereditary male chief.

The two examples of the Hopi and the Trobriand Islands therefore represent two excellent cases of how diverse and inconsistent male-female relations can be within the heterogeneous range of known matrilineal societies. Above, I have shown that matrilineal societies can be either centralized (Trobriand Islands) or decentralized (Hopi), that households in matrilineal societies may either be headed by an older woman of the house (Hopi) or a man – the mother's brother – (Trobriand Islands), and that females in matrilineal societies may participate in communal politics (as part of the elders' council among the Hopi) or may not (all key decisions made by the male chief on the Trobriand Islands) (see Tab. 17). Therefore, whether or not it is justified, the ascription of matrilineal descent to certain prehistoric societies per se in no way implies that women were in fact either the heads of the households, or that they participated in decision-making beyond the house.

¹²⁴³ Schlegel 1973.

¹²⁴⁴ Malinowski 1929.

	Hopi	Trobriand Islands
Descent	Matrilineal	Matrilineal
Political (de)centralization	Decentralized, acephalous	Centralized
The highest political office	A council of elders, men and women	The chief
Residence	Matrilocal	Avunculocal
House ownership	Women	Men own the house and the storage house
Ownership of household items	Women	Women
Land Ownership	Women	Men
Stock Ownership	Men (sheep, later also cattle and horses, which strengthened the male position)	Men (chicken, pigs)
Long-Distance Exchange	Men	Men
Female Mobility	Restricted to the village (excluded from trading)	Restricted to the village (excluded from <i>kula</i> and other long-distance voyages)
Sponsorship of festivals	Women	Men (the chief)
Religious ceremonies	Men	Men (the chief)
Conflict resolution, warfare	Men	Men (the chief)
Hereditary authority in community politics	None	Present
Political decisions within the household	Women	Men (mother's brothers)
Political decisions outside the household	Council of elders, men and women	The chief

Tab. 17 A summary of socio-political differences between two different matrilineal societies

The House Model as an Act of Resistance

An awareness of the multiplicity of gender roles in matrilineal societies challenges the assumption that women are necessarily in a position of leadership either within or outside the house. This now allows a return to the analysis of the late Neolithic house model at Platia Magoula Zarkou, which crucially depicts women as larger in size than men. As I have argued above, it is likely that the house model was produced by women. However, questions remain: for whom was it sculpted, and why were women sculpted much larger than men? Was it produced for women? For men? For children? To be seen? To be hidden?

The house model was deposited on top of a layer of ash and was quickly covered by a layer of mud, which served as the first Late Neolithic floor in an open area. Hence, from the archaeological data, it can be assumed that the house model was produced as an object of public display, over a short period of time, as an exhibit for women, men, and children to see. After this short period of display in an open area, the house model at Platia Magoula Zarkou was buried underground, hidden from the dwellers at Platia Magoula Zarkou, and remembered by them. The fact that the house model was buried in an open, public space,¹²⁴⁵ furthermore supports the idea that the model was produced for dwellers of Late Neolithic Platia Magoula Zarkou, including men, women, and children from different households. The public, ritual deposition of the model fits well with the interpretation of the house model depicting an 'anti-

¹²⁴⁵ Alram-Stern 2022; Alram-Stern in press.

structure',¹²⁴⁶ which is relevant to the community as a whole and not only particular segments of it. The concept of 'anti-structure'¹²⁴⁷ can be further supported though a temporal dimension since the house model was displayed over a restricted period of time (a liminal phase) and then buried underground.

Alternatively, it could be that the house model was remembered only by female potters. Maybe this was a way in which women, as subaltern subjects within a male-dominated patrilineal society, could actually model a parallel, inverse reality, depict female power, or voice their aspirations. Sharing such matters with the other members of their household could have had damaging consequences for women and children. Perhaps women chose not to communicate this, and to protect their own household from conflict. Whatever the reason, women created effigies in clay, not necessarily reflecting solely an emic, but more likely an imagined, symbolic reality, before burying them in the ground.

Although a good ethnographic explanation for a similar act is missing, women among the Baruya (an acephalous but male-dominated patrilineal society) consciously chose to commit suicide rather than to communicate experiences of male oppression to their husbands, brothers, or cousins.¹²⁴⁸ Alternatively, before making the final decision to end their lives and to break with life, women avoided communicating their needs, but spoke through actions. Baruya women could decide to 'forget' to cook for their husbands or save food for them; to visit their natal family for a long period; women could restrict their husband's sexual access; kill their new-born as revenge against their husband's lineage; or even kill the husband.¹²⁴⁹ Therefore, a house model from Platia Magoula Zarkou, in which women are depicted much larger in size than men, may be just one such act of social action translated into material terms. Produced with the intent of not being seen, the female potters at Platia Magoula Zarkou may have buried their aspirations – reflected in the house model – in the ground.

Two examples – the ethnographic case from Baruya and the archaeological case of the house model from Platia Magoula Zarkou – also provide evidence that in non-state societies, hierarchy was not unquestionable and not always taken as self-evident. On the contrary, it appears that while the hegemonic ideology in pre-modern societies has not supported challenges to the existing hierarchies, the two cases demonstrate that in pre-modern times, hierarchy was also, in some cases, seen as unnecessary or undesirable, and was therefore contested through actions. With regard to the house model at Platia Magoula Zarkou, this interpretation seems much more viable than those along the lines of a matrilineal society in which women supposedly took up leading socio-political roles outside the house, as recently proposed by Risch¹²⁵⁰ for cooperative affluent societies. An assumption of matriarchal prehistory under these specified sedentary farming conditions should be understood as a *matriarchal myth*¹²⁵¹ in prehistoric archaeology, rather than a serious theoretical concept or potential empirical reality.¹²⁵²

All of this, however, does not exclude the possibility that women in this archaeological context may well have seen themselves, and been appreciated by others, as 'centres of the house'.¹²⁵³ The idea of a 'centre of the house' certainly conforms not only to matrilineal societies (such as in the case of the Hopi described above) but also to patrilineal societies,

¹²⁴⁶ Turner 2009 [1969].

¹²⁴⁷ Turner 2009 [1969].

¹²⁴⁸ Godelier 1986a.

¹²⁴⁹ Godelier 1986a, 149–150.

¹²⁵⁰ Risch 2018.

¹²⁵¹ Eller 2006.

¹²⁵² Nevertheless, matrilineal societies – including transmission of houses through the female line – were documented in the 18th, 19th and 20th centuries in some parts of the coastal areas of the Aegean basin, under specific social and ecological conditions (Goody 1990, 386–396).

¹²⁵³ Gingrich 2001.

such as the Munebbih, documented since the 1980s in southwest Arabia.¹²⁵⁴ This ethnographic example provides a better comparative case for Late Neolithic Platia Magoula Zarkou based on mixed economies, which, in the case of the Munebbih, included breeding large animals (e.g. cattle) and more or less sedentary farming, similar to that observed at Platia Magoula Zarkou.

The Munebbih are a tribal society with segmentary traits, including a shallow patrilineal descent reckoning that displayed links to the overall tribe's formal patrilineal genealogies (see Chapter II, Tab. 2), located in a remote mountain of southwest Arabia, far from the major trading routes and with little resemblance to the 'big traditions' related to the Koran. All Munebbih households practised mixed farming by agriculture on irrigated terraced fields and the herding of sheep, goats, and camels or cattle, with an elaborate distribution of male and female tasks and, consequently, spaces. Most Munebbih female tasks comprised activities inside or in close proximity to the house. Although men built and owned the house, women were responsible for the daily household tasks of feeding and raising children, cooking, and gardening close to the house. Male daily tasks included slaughtering or selling animals and conducting agriculture on the terraced fields, beekeeping, and planting trees. Women only worked in the fields during peak times, and had no say over the economic outcomes of male labour. Women sold the surpluses of their garden and gathering labour, considered as prestige objects, in the local markets. Among the Munebbih, a house was the central territory of female space, while other parts of a village, including the fields, meadows and forest, were secondary female spaces. Hence women, children, and men alike perceived women as the 'centre of the house', which was quite in line with existing elements of patrilineal logic.

Based on the Munebbih case, it is then likely that the house model from Platia Magoula Zarkou could provide a material example of an 'act of resistance' or an 'anti-structure' as a ritual object. Simultaneously, the house model could represent women as the 'centre of the house'. Therefore, it would be erroneous to simply conclude that the larger size of the female figurines represented the socio-political domination of women within and outside the house or a household, as proposed by Risch.¹²⁵⁵ Instead, it should be highlighted that the central role of women within the household may be intrinsically linked to both matrilineal and patrilineal societies, and that matrilineal descent does not necessarily imply that women hold the most important roles either within or outside the house. The house model from Platia Magoula Zarkou is therefore an example of women seeing themselves and being appreciated by others as the 'centre of the house' within a patrilineal context, in which houses were primarily female spaces, and were perceived as such by both female and male dwellers at Late Neolithic Platia Magoula Zarkou.

VI.3. Regional Mixed Economy at Platia Magoula Zarkou

Following the conclusion that dwellers at Platia Magoula Zarkou most probably would have been organized along patrilineal rather than matrilineal lines, let us now look beyond the house model, into the broader region of Thessaly. For the Late Neolithic, Platia Magoula Zarkou has been interpreted as a grey on grey pottery production centre. This chapter therefore brings us to the organization of production and the means of exchange of pottery within the Thessalian plain during Late Neolithic times. Recent insights show that not only decorated but also non-decorated pots were exchanged during the Neolithic over long distances in Thessaly.¹²⁵⁶ On that basis I address these pots through the medium of several possible channels of exchange:

¹²⁵⁴ Gingrich 2001.

¹²⁵⁵ Risch 2018.

¹²⁵⁶ Pentedeka 2011.

bridewealth, dowry, the generalized exchange of women, and finally, pots as multipurpose and multi-relational objects. In the last part of this section, I provide some insights regarding pottery production from Wanigelan potters in their Papua New Guinea big man society. There, pots were one of the main female-produced items for regional exchange, which can be extended to conclusions regarding non-wheel pottery production. First, pottery is produced both for domestic consumption and regional exchange. Second, whereas under these specified conditions women are commonly producers of pottery, men are more likely in charge of the exchange of these pots. Third, pots played a significant role as markers of the group's identity. By establishing these three interim conclusions, we can already see that the distinction between production for use and production for exchange within the DMP is not as straightforward as commonly assumed. However, this, in turn, further strengthens the central thesis of this book.

Until recently, it was widely agreed that the Neolithic pottery exchanged on a regional scale within the Aegean basin comprised only decorated wares with a significant symbolic function, and not utilitarian, non-decorated pots, as was proposed in the 1990s by Catherine Perlès.¹²⁵⁷ Recently, the insights gained from a detailed study of Neolithic pottery in Thessaly argued against such a claim.¹²⁵⁸ Through chemical and petrographic analyses from twelve Neolithic Thessalian sites along the Pineios River and to the south, Pentedeka showed that pots of all sizes, wares, and shapes circulated over long distances across the Thessalian plain. This regional exchange included both decorated and monochrome wares, albeit in different proportions.¹²⁵⁹ Platia Magoula Zarkou was among the sites which specialized in the production of grey on grey pottery in this Late Neolithic exchange network. During this period, the vessels exchanged mostly comprised small to medium-sized cups and bowls, whose functional properties are linked to consumption.¹²⁶⁰ The number of exchanged objects was comparatively small in relation to the overall local pottery production and consumption at each of the twelve sites under investigation. The relevant pieces were interpreted as most probably being used for rites of passage, such as a marriage to someone outside the local village, or the death of someone from another village.¹²⁶¹ The use of imported wares for feasting was excluded, due to the rather small number of foreign objects in comparison to the local ones at each of the twelve sites. Apart from this observation, Pentedeka argued that

‘One of the more distinctive elements of the Neolithic material culture in Thessaly is pottery, demonstrating a large variety of surface treatments defining numerous decorated and plain ware categories, alongside evident stylistic homogeneity, indicating close connections between sites.’¹²⁶²

Here we come to an important distinction. On the one hand, there was a clear diversity in the surface treatment of pots between Late Neolithic Thessalian sites: yet on the other hand, the shape of the pots was homogeneous across different sites in the eastern and western Thessalian plains. As I have argued above, it is most likely that women were the producers of pottery during the Neolithic, which can be supported through ethnographic observations of non-wheel pottery from Oceania, sub-Saharan Africa, and indigenous North and South America. By acknowledging the female role in pottery production in Neolithic times, we can better understand the social lives of pots, and also of people, at these sites.

¹²⁵⁷ Perlès 1992.

¹²⁵⁸ Pentedeka 2017.

¹²⁵⁹ Pentedeka 2017.

¹²⁶⁰ Pentedeka 2017.

¹²⁶¹ Pentedeka 2017, 147.

¹²⁶² Pentedeka 2011, 110.

During the Late Neolithic, the Thessalian plain consisted of numerous village communities, mostly scattered along the alluvial plains of the Pineios River in the east and south, and its tributaries to the north and south. Access to the fluvial plains ensured fresh water and raw clay for the production of pots, which were mostly produced locally at each site.¹²⁶³ The population of each village could hardly have exceeded a few hundred residents, as the village size was rarely more than 2 hectares.¹²⁶⁴ Based on the discussion of intra-village endogamy or exogamy in Chapter IV, we can postulate that Neolithic Thessalian villages needed, at least to some extent, to establish and maintain marriage alliances beyond the single village site. This would necessarily lead to an interdependent network of affinity and alliance, which could provide a basis for more or less peaceful economic relations and a regional economy between different Thessalian sites. Given that pots from elsewhere were found at each site, albeit in a much smaller proportion than locally produced ones, we can accept Pentedeka's suggestion that these pots were exchanged upon marriage.¹²⁶⁵ If this was the case, then there are several possibilities concerning the socio-economic transactions that may occur upon marriage or following it.

Pots as Bridewealth

One of the possibilities for the exchange of pots between different Thessalian sites is the transaction between the groom's and bride's kin groups upon marriage, commonly known as *bridewealth* in the anthropological literature.¹²⁶⁶ In a patrilineal society, the groom's kin would give material items such as pots – as well as other valuable goods (within and outside those pots) such as agricultural products and other (non)foodstuffs – to the bride's kin as part of a wedding celebration. In a matrilineal society, the process would be reversed: the bride's family might give pots and other valuables to the groom's kin. In the case of a *bridewealth* marriage transaction, a bride's father might retain some of these transactions, but sooner or later at least substantial parts of these material transactions would go to the bride, to be pooled through her into the newly-wed couple's resources. Land is usually exempt from marriage transactions since a married person would join another family after marriage and access to land would be secured through the family's clan structure.¹²⁶⁷

In *The Oriental, the Ancient and the Primitive: Systems of Marriage and the Family in the Pre-Industrial Societies of Eurasia*, Goody¹²⁶⁸ showed that this type of marriage transaction predominated until the Bronze Age in Eurasia, and up to recent times in Africa. In both cases, the exchange of movable property between groups of non-kin, the so-called *bridewealth*, did not result in increasingly hierarchical differences in wealth, since horticultural subsistence production with a digging stick required the broadly equal involvement of groups in subsistence, and therefore class differences could not emerge.

Outside Africa, bridewealth among mostly patrilineal big man societies resulted in competitive regional exchanges, which allowed big men to become renowned across a broader region. A big man's name and wealth was not inherited by his sons, but was personally achieved while being collectively consumed through feasting. Therefore, collective feasting perpetuated regional exchange and competition between big men, and prevented the permanent accumulation of excessive wealth by a single household in comparison to others.¹²⁶⁹ Based on the ethnographic record collected among big man societies, substantial marriage transactions

¹²⁶³ Pentedeka 2011; Pentedeka 2017.

¹²⁶⁴ For a detailed explanation of the correlation between settlement size and population size, see Chapter IV.

¹²⁶⁵ Pentedeka 2017.

¹²⁶⁶ Goody 1990; Godelier 1999; Godelier 2018.

¹²⁶⁷ Goody 1990; Godelier 1999; Godelier 2018.

¹²⁶⁸ Goody 1990.

¹²⁶⁹ Godelier 1991; Lederman 2015.

are thus not a particularly specific ‘Bronze Age’ characteristic. They may have existed among affluent communities in rich ecological niches prior to the Bronze Age in the Old World. This also includes the strong possibility that they occurred prior to the existence of class inequality, which is applicable to Late Neolithic Platia Magoula Zarkou.

Pots as Dowry

Another practice, known as *diverging devolution*, which, according to Goody,¹²⁷⁰ emerged in Eurasia during the Bronze Age, was the transmission of goods at marriage from parents to their daughters and sons. This implies that upon her marriage, a bride would inherit a dowry from her parents, which usually consisted of movable goods such as bedding, furniture, stock, and occasionally also a piece of immovable property, such as land or a house (at least as an inherited claim). In this case, unlike bridewealth transactions, the household or clan-based property did not remain intact. Instead, it was split between siblings of both genders in the next generation, in equal or unequal parts. Therefore, diverging devolution led to increasing differentiation in wealth and status. The repetitive segmentation of farming land through diverging devolution and increased yields following the adoption of the wheel and the plough paved the way towards a split into two classes: the *landless*, who in the absence of land and money could ‘sell’ their labour to the ruling elite to survive, and the *landed*, who reproduced themselves by exploitation of ‘free labour’ and the marriage of their offspring to other landed rulers, so that the property remained within the family. The practice of isogamy, ‘the tendency for like to marry like’,¹²⁷¹ ensured little social mobility between groups, in order to preserve and pass on status and property.

Goody argued that marriage rules previously based on the incest taboo and clan exogamy were complemented and, in part, replaced by status and class endogamy during the Eurasian Bronze Age, in a system known as isogamy.¹²⁷² This newly established practice structurally reinforced the ideology that supported the division between the two classes of landed and landless, since kinship between the rulers and the ruled could no longer be traced through a common ancestor. In this way, territorial membership and boundary making gained in importance as the basis for taxation and a redistributive economy that supported the rich and landed, now detached from agricultural work. Diverging devolution is initially the transmission of goods from parents to their offspring, e.g. from parents to a bride, and only then the transaction of goods between two families. In the case of viri- or neolocal residence, therefore, the pots may have been transmitted to the bride and then brought with her to the couple’s new house. In this case, following Alram-Stern’s interpretation of the house model, one could argue that such a practice might have already existed during the Late Neolithic. Alram-Stern interpreted the small female figurines in the back-right corner of the house as unrelated individuals:

‘The woman, who has a damaged head, and the asexual figurine (the immature girl) have similar decoration to the other female figurines of the house model and could therefore be related to the women of the other groups, being younger relatives of them. However, the other woman in this group is of a different style, with large breasts and without incised decoration. Therefore, most probably she was not related to the other figurines in the household. In consequence, this group does not represent a family, but is dominated by women connected to the household by their activities.’¹²⁷³

¹²⁷⁰ Goody 1969; Goody 1971; Goody 1990; Goody 2006.

¹²⁷¹ Goody 1990, 2.

¹²⁷² Goody 1969; Goody 1971; Goody 1990; Goody 2006.

¹²⁷³ Alram-Stern 2022, 477.

With this description, she argued that ‘in this house, [these figurines] represent not necessarily the younger ones, but most probably the group of the lowest familial status.’¹²⁷⁴ However, the evidence from the cemetery does not indicate any hierarchical status differences in burial practices between persons. Other archaeological evidence for the existence of clear-cut status groups or classes is also lacking (e.g. the absence of monumental public buildings, the absence of record keeping and writing, the absence of plough agriculture). Consequently, it does not appear likely that a class-based society existed in Late Neolithic Platia Magoula Zarkou. Without the existence of classes, the transfer of pots and related goods through marriage transactions and inheritance may be supported by the record at Platia Magoula Zarkou, but cannot be associated with any emerging hierarchies. However, the integration of non-related minority persons into a household, possibly having a lower social status than those linked through kinship, should not be perceived as unlikely for non-state societies without distinct status groups or classes.¹²⁷⁵

A Sister for a Wife, a Pot for a Barkcloth

After identifying two possible marriage transactions, namely the bridewealth and dowry, through which pots (and items within pots) could be transmitted upon marriage, the third possibility for the wide distribution of pots across the Thessalian plain could be the result of the *generalized exchange* of women.¹²⁷⁶ In this marriage transaction, asymmetrical sets of relations between people and things create rules by which people could only be exchanged or given in return for people or things within or among tribal groups. Items of exchange can be further classified into locally more or less valuable goods with a regional exchange value, in which valuable goods could only be exchanged for other valuable goods.¹²⁷⁷ This kind of marriage practice was common among certain Melanesian great man societies, in which two men usually agreed to exchange their respective sisters for marriage within or between tribal groups.¹²⁷⁸ After marriage, the Baruya bride moved to the husband’s house and, apart from some of the bride’s personal possessions, no other goods were given from the groom’s to the bride’s parents: the ‘gift and counter-gift’ were the two women themselves. Although no goods as such were exchanged for one another at the marriage, women brought their personal belongings along with them, usually objects made by women, including string bags, fibre skirts, barkcloth, pottery, and mats.¹²⁷⁹ These women-made and women-worn/used objects would then travel, without the intentional exchange of these objects as parts of women’s personal belongings, from one village to another due to marriage. Therefore, it is also possible that they could be found within the archaeological deposit of another village, far from their production centre.

Where the *generalized exchange* of sisters, without the exchange of material objects, is a predominant practice within a given great man tribal group, this is generally not the only way of obtaining a wife. Each great man society needed to establish and maintain more or less peaceful relations with their neighbours, with whom the group would not exchange sisters, but ‘give’ a daughter, in return for external goods. The need to maintain relatively peaceful alliances and gain access to objects from afar, not available within their own group, meant

¹²⁷⁴ Alram-Stern 2022, 477.

¹²⁷⁵ For example, the integration of non-related members into a household was previously observed among the patrilineal Nuer, who integrated non-related members through ‘adoption, cognatic kinship, or kinship fictions’ (Evans-Pritchard 1940, 228), Tikopia, who integrated non-related members through adoption (Firth 1959; Firth 1983), as well as fisher-foragers of the Pacific Northwest (Wengrow – Graeber 2018).

¹²⁷⁶ Godelier 1991.

¹²⁷⁷ Godelier 1991.

¹²⁷⁸ Godelier 1986a; Jorgensen 1991.

¹²⁷⁹ Hermkens – Lepani 2017a, 2.

that women could be exchanged for *bridewealth* ('*brideprice*'). In this case, the exchange of women upon marriage follows the rule for the internal exchange of women among big man societies. However, within great man societies, such exchanges were only of minor importance. The difference between big man societies in which *bridewealth* was the predominant matrimonial practice and great man societies where such a practice is of minimal importance 'is not a matter of the presence or absence of the principle that equates women with wealth, but whether or not this principle is subordinate or dominant among other principles offering other possibilities of establishing matrimonial alliances'.¹²⁸⁰ Therefore, this could very well explain the minimal presence of foreign pieces of pottery at each of the Late Neolithic Thessalian sites. It could point towards an exchange of women for external goods: not necessarily pottery, but also goods stored within those pots, as pottery was, in general, produced locally at each site. Nevertheless, considering that women produced pottery, external pottery wares could be brought into a new household in the absence of exchange, as a bride's personal belonging, after marriage. Again, this feature of potential objects in inheritance and 'big' marriage transactions is possible without Bronze Age technology, any market-based economy, or class division: and it is therefore applicable to Late Neolithic Platia Magoula Zarkou.

Pots as Multi-Purpose and Multi-Relational Objects

Marriage transactions may sometimes, albeit not frequently, be linked with the commemoration of death as proposed by Pentedeka.¹²⁸¹ Yet these ritualized transactions through kinship relations are not the only possible set of reasons for the wide distribution of pots across the Neolithic Thessalian plain.¹²⁸² Pottery, as well as other female-produced objects, may frequently be crucial items of regional exchange, as valuables or commodities in themselves among non-state societies, which may also include items stored in those pots. In the introduction to *Sinuuous Objects: Revaluing Women's Wealth in the Contemporary Pacific*, the editors summarized ethnographic insights from Papua New Guinea, showing that pots can be critical for making land claims and signifying social relations between groups.¹²⁸³ Moreover, the pots themselves can also embody gender, clan identity, and ancestral power.¹²⁸⁴ The volume's authors therefore classify pots, alongside other objects produced by women, as *sinuuous*, since layers of value, meaning and agency are inherent to those objects. This can be better understood from the summarized example of Wanigelan pottery production and regional consumption below, in which Wanigelan women were the producers and Wanigelan men the primary 'distributors' of female-produced objects.

In Papua New Guinea's Central Province, Wanigela women were traditionally known for the production of cooking pots or '*baitah nkwut*'.¹²⁸⁵ These were widely distributed within the Collingwood Bay region, in which big man societies were organized by patrilineal clan membership and competitive regional exchanges. In the past, girls grew up watching their mothers producing pots and learning from them, and most of the pots were produced by young women.¹²⁸⁶ Wanigela women produced pots¹²⁸⁷ for different purposes: to collect and store water, to

¹²⁸⁰ Godelier 1986a, 25.

¹²⁸¹ Pentedeka 2017.

¹²⁸² Pentedeka 2017.

¹²⁸³ Hermkens – Lepani 2017b.

¹²⁸⁴ Hermkens – Lepani 2017a, 2.

¹²⁸⁵ Bonshek 2017.

¹²⁸⁶ Bonshek 2017.

¹²⁸⁷ Wanigelan women collected clay in the dark when no one else from the village could see them. Moreover, Elisabeth Bonshek, who conducted participant observation among Wanigela, could not participate in firing clay pots. Wanigelan women explained that firing should be conducted in solitude. If not, the pot could break. Although Wanigelan women could not provide any explanation why the clay for pottery was collected in the

eat and serve with, to participate in ceremonial feasting, to cook with, and to use as objects of regional exchange.¹²⁸⁸ Cooking pots or '*baitah nkwut*' were an important item of regional exchange for other female-produced objects such as barkcloth, mats, and string bags, and it was Wanigela men who embarked on these exchange expeditions.¹²⁸⁹

On the village scale, Wanigela pottery production was emically perceived as 'this is what Wanigelans do',¹²⁹⁰ and pottery production was a central part of girls' upbringing, including the continued transmission of specific clan designs.¹²⁹¹ Instead of solely producing pots for use or exchange, Wanigelan women kept the most beautiful pieces in the house, which coincides with Godelier's claim that some things are not given but kept (within households) for their supreme value.¹²⁹²

'While all pots are made in the same way, they are not all destined for exchange. Pots with intricate applied patterns covering the body are kept out of the exchange network, although they might be given away as gifts. Such highly decorated pots are not readily visible in people's houses, but they may be brought out with some pride if interest is shown in them. These 'heirloom' pots often carry clan designs, and as such they manifest a connection between the pot, its owner and his or her clan identity.'¹²⁹³

After the pot's completion, a female potter would then sort out the nicest pieces to keep as a household heirloom, separate from other not perfectly shaped and decorated pots, the latter commonly being used as a gift or an item of barter for other goods. In the past, Wanigela men embarked on long-distance expeditions, which were organized along clan lines, to exchange the *baitah nkwut* for feathers with people inland and for shell valuables and obsidian flakes with people living on the coast.¹²⁹⁴ Apart from these voyages, men embarked on *nunug* expeditions, in which cooking pots would be exchanged for *nunug*, ground shell discs that were not produced locally, but which formed a necessary part of bridewealth transactions for Wanigela. *Nunug* were also used for bodily decoration and were given to young Wanigelan initiates (male and female) who were only then able to marry and enter a new stage of life.¹²⁹⁵ Men also exchanged cooking pots for pigs and a type of banana. Wanigela's locally produced cooking pots and externally acquired goods, such as *nunug*, were both crucial for society's reproduction and men's dependence on women's work:

'The acquisition of *nunug* brought renown to the men who acquired them. Participation by a young man in *nunug* expeditions was a mark of his adult status (boys did not go on such expeditions). Wanigela men, therefore, depended upon the skills of their wives, mothers and grandmothers in making the pots used to obtain *nunug*. Women's work in the form of *baitab nokwat* was therefore essential for the acquisition of *nunug* and formed an essential part of the family's cultural capital and a requirement for cultural reproduction in Wanigela.'¹²⁹⁶

dark – when no one could see them – Bonshek explains that sorcery remains important among Wanigelans and therefore people might be wary of letting others know what they are doing (E. Bonshek, pers. comm. 2020).

¹²⁸⁸ Bonshek 2017, 125.

¹²⁸⁹ Bonshek 2017.

¹²⁹⁰ Bonshek 2017, 126.

¹²⁹¹ Bonshek 2017.

¹²⁹² Godelier 1999; Godelier 2011, 193

¹²⁹³ Bonshek 2017, 134.

¹²⁹⁴ Bonshek 2017.

¹²⁹⁵ Bonshek 2017.

¹²⁹⁶ Bonshek 2017, 135.

For Wanigelans, pottery production did not represent wealth, but instead manifested economic, cultural, and social value.¹²⁹⁷ Within the broader region, all potters were Wanigelans; however, not all Wanigelans were potters. Wanigelans identified themselves with a number of potting villages, speaking the same language but belonging to 50 different clans, and therefore they cannot be understood as a bounded cultural group.¹²⁹⁸ Traditionally, Wanigelans belonged to three different Austronesian-speaking (e.g. Ubir, Oyan groups) and non-Austronesian language groups (e.g. Onjob).¹²⁹⁹ All of these groups had migrated into the ‘Wanigelan swamps’, in which the three groups of villages and hamlets were fenced, as the newcomers’ settlements were often raided. With the passage of time, the three groups of Wanigelans established peaceful contacts by intermarriage (i.e. bride exchange) and came to be renowned for their pottery production within the wider region.¹³⁰⁰ For example, the Mukawa, dwelling at the tip of Cape Vogel, were the middlemen for the exchange of Wanigelan pottery for obsidian from the Ferguson Islands.¹³⁰¹ Through the Mukawa, Wanigelans exchanged one pot for a fist-sized lump of obsidian, the source of which was located on a small island 170km east of Collingwood Bay.¹³⁰²

There are a few typical traits in the Wanigelan pottery production example that could be extended to non-wheel made pottery production. First, Wanigelan women do not produce pottery only for use but also for exchange as well as for the ‘supreme value’, keeping the most beautiful examples at home. Second, the example highlights a complementary gendered division of labour: whereas women produce pottery, men exchange these items for non-locally available goods, which are essential for society’s reproduction and not prestige (e.g. *nunug* – ground shell discs, obsidian). Third, it showcases that pots played a significant role as markers of the group’s clan identity and maintenance of both local and regional relations between groups. The sum of all this makes the Wanigelan case comparatively significant to Platia Magoula Zarkou, where pottery production was also an important village- or gender-based regional craft specialization.

VI.4. Pot Exchange at Platia Magoula Zarkou

If pots were an important item not only for local consumption but also for regional exchange at Platia Magoula Zarkou, then we should open up the discussion on what items were exchanged in return for pots produced locally. In this chapter, I compare the compatibility of lithic objects’, namely obsidian and chocolate chert’s distribution within Thessaly to show that lithic objects and pots may have belonged to different spheres of exchange. Given that Platia Magoula Zarkou’s pots have reached long distances, the lack of access to obsidian and chocolate chert is more than evident. Therefore, we cannot conclude that pots were indeed transacted in direct exchange for pots. Following Bohannan’s interpretation of the Tiv’s economic systems¹³⁰³ comprising distinct spheres of exchange, I conclude that not only were pottery and stone tools necessarily traded through different exchange networks¹³⁰⁴ but that these two groups of objects were also valued differently. During the Late Neolithic obsidian and pots belonged to two different spheres of exchange, despite both being important subsistence items as well as items of local and regional exchange.

¹²⁹⁷ Bonshek 2017.

¹²⁹⁸ Bonshek 2017.

¹²⁹⁹ Egloff 1971, 13–15.

¹³⁰⁰ Egloff 1971, 13–15.

¹³⁰¹ Egloff 1971, 19.

¹³⁰² Egloff 1971, 19.

¹³⁰³ Bohannan 1955, 1959.

¹³⁰⁴ Perlès – Papagiannaki 2022.

In all likelihood, a *restricted craft integration* of pottery at Platia Magoula Zarkou was well established. The exchange of pottery nevertheless failed to provide the means for longevity for this site. As a parallel note on both Platia Magoula Zarkou and Çukuriçi Höyük, we can see how regional specialization, be it in pottery production or metals, may not have guaranteed longevity to either of the two settlement sites. Both *generalized craft integration* and specialized craft integration at the two sites therefore created a regional niche, which could be disrupted through local as well as regional developments. A shift towards the reduced value of pottery at Platia Magoula Zarkou and arsenical copper objects at Çukuriçi Höyük in comparison to other objects and materials, such as obsidian in hinterland Thessaly or tin bronzes in western Anatolia, may have been regulated through newly emerging spheres of exchange. Through shifting values of such goods, sites would be given unequal opportunities to participate in regional exchange networks. Certainly, neither Platia Magoula Zarkou nor Çukuriçi Höyük were the winners of these shifting value regimes, but the opposite.

Based on the ethnographic accounts of female-produced pottery outlined above, we can draw a further conclusion regarding the regional distribution of pottery within Late Neolithic Thessalian sites. For the production of pots, the Wanigelan ethnographic case shows that pottery making can be a key component of women's upbringing in villages specializing in pottery production. Wanigelan women were not full-time producers of pots, but pottery production was an important regional expertise since other villages within the Collingwood Bay area lacked raw clay and the women's expertise. In a complementary manner, women in other villages within the Collingwood Bay area and beyond specialized in the production of other products for which the expertise or raw materials were lacking in Wanigelan territory. This regional 'specialization' of craftwork can be contrasted with the context of the Thessalian Late Neolithic, where all of the twelve sites examined confirmed predominantly local pottery production with minimal importance of imported vessels: the pots were not the main item of regional exchange. However, the five Late Neolithic Thessalian sites, among them Platia Magoula Zarkou, specialized in a certain type of pottery, which was widely distributed across Thessaly.¹³⁰⁵ These mostly locally produced pots were of the same shape, but were made using different local clay recipes, treatments, and firing techniques throughout the Thessalian Late Neolithic. Considering that women at Platia Magoula Zarkou were either *generalized* or *restricted potting specialists*, producing pottery on a part-time and not a full-time basis, what can we say about the Late Neolithic society regarding pottery distribution and exchange?

First, let us examine the similarities between sites regarding shape. If women within a particular settlement developed a particular recipe and practice for producing pots, these wares needed to satisfy their consumers – the members of a household and the multi-generational village settlement. Girls would learn potting skills from their mothers, as was observed in Wanigela and elsewhere. This learning process would include the sourcing of clay, preparation of the clay recipe, firing, and decorating a pot in accordance with the family group, most likely the father's. Through 'participant observation' as well as by mimetic trial and error practices, a girl could acquire the same basic skills as her mother, which she could use in an extended or new household after marriage.

As I have argued in Chapter III, Neolithic communities most likely worked with an integrated package of large domestic animals, including cattle, sheep, goats, and pigs, and within Western Asia tended to be patrilineal, which corresponds to previous anthropological contextualization of semi-sedentary communities.¹³⁰⁶ If this was the case, then it was most likely that women left their home upon marriage. On the one hand, a bride with potting skills could marry a man from another group within the same village, where she could source clay from the village's communal or the household's piece of land. On the other hand, a bride with pot-

¹³⁰⁵ Pentedeka 2017.

¹³⁰⁶ Gingrich – Schweitzer 2014.

ting skills could virilocally marry a man from another village, where she would most likely need to learn about new sources of clay, new recipes, and possibly new firing techniques. In both cases, however, a bride needed to acquire new skills in decorating a pot in a new manner, according to the groom's group's patterns – skills that could be learned from her mother- or sisters-in-law. The most important predisposition – potting expertise, including the modelling of clay into a vessel with a particular form and function – were skills a bride would bring along with her. The Late Neolithic assemblage from Thessaly, including homogeneous forms of vessels alongside differentiated decorative patterns, could, then, be a material reflection of the established practice of women being married out, in marriages within – as well as between – Thessalian settlements. Whereas clay sources and decorative techniques 'stayed put', through marriage women moved between households and, occasionally, between settlements, producing vessels of the same shape but of different decorative patterns and firing techniques.

What kind of marriage transactions can be inferred from such prehistoric records remains enigmatic. It is highly probable, however, that pots could be transferred as bridewealth but rarely as dowries during the Late Neolithic. Based on the Wanigelan case presented above, it is also evident that all Thessalian village settlements did not necessarily have to be integrated into either a single tribal territory or a linguistic group. The latter can be observed from Wanigelan potters, where the term 'Wanigelans' refers to a territorial and socio-economic group including female potters which lives in the swamps of Collingwood Bay without any claim to common ancestry, such as would be the case for a segmentary lineage tribe. While Wanigelans produced the same types of pots in terms of shape, they decorated them in accordance with more than 50 different clan insignia, and they belonged to three different (non)Austronesian-speaking groups.¹³⁰⁷ The same case is likely for Platia Magoula Zarkou and the wider region of Thessaly, where different sites specialized in different types of pottery production of the same shape, but this dimension of cultural affinity does not mean that they necessarily belonged to the same ethnic, linguistic, or political group.

A Pot for Chocolate Chert at Platia Magoula Zarkou?

On the Late Neolithic Thessalian plain, Pentedeka¹³⁰⁸ identified five 'nodal points' or centres of specialized pottery production. One of these Late Neolithic pottery production centres was Platia Magoula Zarkou, which specialized in the production of grey on grey pottery. Grey on grey pottery from Platia Magoula Zarkou was found at many other sites to the north and northwest, along the Pindus range, as well as to the south, along the tributaries of the Pineios River. Less of this pottery reached the eastern part of the Thessalian plain, but some pieces were recovered from Tsangli, close to the Pagasetic Gulf. Although the pottery may have been involved in marriage transactions, it appears that this was not the only means of regional exchange and inter-site interactions.

All sites across the Thessalian plain relied on acquiring non-local goods, which included stone tools made of Melian obsidian, chocolate chert, or honey chert. These were the three most commonly found raw materials in the Thessalian plain in the Neolithic and Bronze Age periods.¹³⁰⁹ Regarding stone tools, there is a significant division between the western and eastern Thessalian sites. Throughout the Neolithic and the Bronze Age, western Thessalian sites (including Platia Magoula Zarkou) mainly relied on stone sources of chocolate chert from the Pindus range, which were regionally/locally available, while Melian obsidian was found only in small proportions at those sites.¹³¹⁰ By contrast, the eastern Thessalian sites such as

¹³⁰⁷ Bonshek 2017, 138.

¹³⁰⁸ Pentedeka 2011; Pentedeka 2017.

¹³⁰⁹ Perlès – Papagiannaki 2022.

¹³¹⁰ Karimali 2009.

	Hinterland (western) Thessalian sites (Platia Magoula Zarkou)	Coastal (eastern) Thessalian sites (Pevkakia)
Melian obsidian	Minor presence, most of the pieces imported	Major presence, on-site production of Melian obsidian
Chocolate chert from the Pindus mountain range	Major presence, on-site production of chocolate chert	Minor presence, most of the pieces imported
Pottery Networks	Presence of imported decorated and non-decorated pottery at most of the hinterland sites	Coastal Thessalian sites lie at the edge of the ‘intensified pottery’ interaction

Tab. 18 Summarized distribution of stone tools and pottery at hinterland and coastal Thessalian sites (after Karimali 2009)

Pevkakia, mainly relied on obsidian stone tools from the Cycladic island of Melos, located approximately 300km to the southeast.¹³¹¹ The eastern Thessalian sites, including Pevkakia and others, have demonstrated on-site Melian obsidian blade production, whereas at western Thessalian sites there is no evidence of on-site Melian obsidian knapping: instead, obsidian blades found at these sites appear to have been acquired through exchange.¹³¹² Furthermore, the Late Neolithic western Thessalian sites show evidence of the entire sequence of chocolate chert production, whereas the evidence of chocolate chert knapping is lacking in eastern Thessalian sites, apart from retouched tools¹³¹³ (see Tab. 18).

Recent analyses of lithic stone tools at Platia Magoula Zarkou have provided somewhat different results in comparison to the overall similarities between the eastern and western Thessalian sites. Melian obsidian, along with chocolate and honey chert, is, in fact, better represented at other western Thessalian sites than at Platia Magoula Zarkou.¹³¹⁴ Moreover, Platia Magoula Zarkou showed a larger proportion of retouched tools and a smaller proportion of raw material than other western Thessalian sites, which indicates a scarcity of stone tools at Platia Magoula Zarkou.¹³¹⁵ This led Perlès and Papagiannaki¹³¹⁶ to argue that although Platia Magoula Zarkou was located in an *a priori* ideal nodal position for the exchange of pottery, it was, nevertheless, a marginal node for Melian obsidian exchange during the Late Neolithic and the EBA period. Considering that Platia Magoula Zarkou was a pottery production centre, this result refutes the *a priori* expectation that the specialized production of pots could satisfy people’s needs for external, non-locally available stone tools. Instead, lithic analyses showed that dwellers at Platia Magoula Zarkou did not participate intensively in either Melian obsidian, chocolate chert, or honey chert exchange networks during the Late Neolithic or the Early Bronze Age.¹³¹⁷ Experts in lithic regional evidence concluded that ‘obviously, pots were not traded against flaked stone tools, and these trading networks were entirely independent’.¹³¹⁸ Here, the question arises how to explain the specialization in pottery production for local use and regional exchange versus the scarcity of stone tools during the Late Neolithic at Platia Magoula Zarkou through anthropological contextualization.

¹³¹¹ Karimali 2009.

¹³¹² Karimali 2009.

¹³¹³ Karimali 2009.

¹³¹⁴ Perlès – Papagiannaki 2022.

¹³¹⁵ Perlès – Papagiannaki 2022.

¹³¹⁶ Perlès – Papagiannaki 2022.

¹³¹⁷ Perlès – Papagiannaki 2022.

¹³¹⁸ Perlès – Papagiannaki 2022.

In my view, Platia Magoula Zarkou presents an excellent archaeological case for the existence of ‘spheres of exchange’ and a ‘multi-centric economy’¹³¹⁹ during the Late Neolithic in Thessaly. According to Bohannan, the multi-centric economy is

‘An economy in which a society’s exchangeable goods fall into two or more mutually exclusive spheres, each marked by different institutionalization and different moral values. In some multi-centric economies these spheres remain distinct, though in most there are more or less institutionalized means of converting wealth from one into wealth in another.’¹³²⁰

In the 1950s, the spheres of exchange were described for the acephalous Tiv in central Nigeria, although the same principles were described under different terms elsewhere in Africa, the Pacific, and Melanesia (see Tab. 19).¹³²¹ The Tiv distinguished between three spheres of exchange. The first was the *sphere of subsistence*, including yams, cereals, small livestock (chickens, goats, and sheep), household utensils (mortars, grindstones, calabashes, baskets, and pots), agricultural tools, and raw materials for the production of any items in this category. Traditionally, these goods were locally produced and exchanged through gift and barter exchange, and were sold at local markets in the 1950s. The second sphere of Tiv exchange was the *sphere of prestige*, which included slaves, cattle, *tugudu* white cloth, medicines, magic, and metal rods, which were involved in long-distance exchange. During Bohannan’s fieldwork, these items were never sold at markets but were exchanged at ceremonies, such as ritualized wealth displays. The third sphere of exchange was the *sphere of women*. Traditionally, Tiv men usually exchanged women at marriage, both between Tiv or beyond Tiv villages. Therefore, ‘the only ‘price’ of one woman is another woman’ among the Tiv¹³²² (see Tab. 19). Although most of the items within these three distinct spheres of exchange can, in principle, only be exchanged for another item within the same sphere (*conveyance*, e.g. food for baskets), the exchange of items belonging to different spheres (*conversion*, e.g. food for brass rods) was only possible in exceptional situations and carried a moral connotation:

‘Tiv say that it is ‘good’ to trade food for brass rods, but that it is ‘bad’ to trade brass rods for food, that it is good to trade your cows or brass rods for a wife, but very bad to trade your marriage ward for cows or brass rods.’¹³²³

If we apply the Tiv example to Platia Magoula Zarkou, then it becomes evident that dwellers at this site and in the wider Thessalian plain region distinguished between at least two spheres of exchange, if not more. If pots could not be exchanged for stone tools,¹³²⁴ pots and stone tools then necessarily belonged to different spheres of exchange, and their value as products of labour alone was not directly commensurable. To understand in which hierarchical order the two groups of items were positioned, we need to link the sphere of exchange with the regional trading networks and the availability of raw materials: in this case, clay versus chert and obsidian. If most of the pottery at each site was produced locally during the Late Neolithic on the Thessalian plain, it is obvious that clay was widely available locally and so were the female potting skills (which does not exclude village potting specialists). Therefore clay, and consequently also the finished pots, could be regarded as part of what Bohannan referred to as the *subsistence sphere*, linked with locally available goods. Although obsidian and chert, like pots, were also necessary for subsistence at Platia Magoula Zarkou, it is their restricted regional distribution and the unequal

¹³¹⁹ Bohannan 1959.

¹³²⁰ Bohannan 1959, 492.

¹³²¹ Sillitoe 2006.

¹³²² Bohannan 1959, 495.

¹³²³ Bohannan 1959, 497.

¹³²⁴ Perlès – Papagiannaki 2022.

	Sphere 1: Subsistence (locally available goods; gift and barter exchange)	Sphere 2: Prestige/Precious Goods (inter-regionally available goods; long-distance exchange)	Sphere 3: Women (exchange of women at marriage)
Tiv	Foodstuff (yams, cereals) Small livestock (chickens, goats, sheep) Household utensils (mortars, grindstones, calabashes, baskets, pots) Agricultural tools Raw materials for any items in this category	Slaves Cattle <i>Tugudu</i> white cloth Medicines Magic Metal Rods	Women
Late Neolithic Platia Magoula Zarkou	Locally produced pots	Melian obsidian, Honey chert Chocolate chert	Women??

Tab. 19 Spheres of exchange among the Tiv (after Bohannon 1959) and at Late Neolithic Platia Magoula Zarkou

access to them that would classify obsidian and honey chert as part of the *sphere of prestige*, or, more precisely, *sphere of precious goods*¹³²⁵ linked with long-distance exchange networks. Neither obsidian nor chert were available near Platia Magoula Zarkou (unlike clay), and knapping skills were not well-attested at the site (unlike pottery production and the knapping of chocolate chert); therefore, chocolate and honey chert and obsidian were necessarily scarcer and harder to acquire than locally produced pots (see Tab. 19).

Hence, it appears very likely that the Late Neolithic dwellers of the Thessalian plain distinguished between at least two different spheres of exchange, of which the first contained pots and other locally available items, and the second, chert and stone tools, which were only available through long-distance exchange networks. This means that they could regularly exchange pots for other locally available subsistence items (e.g. food items, baskets, etc.) but not for stone tools. Only on rare occasions, which have been attested archaeologically, did dwellers at Platia Magoula Zarkou exchange pots for stone tools. Therefore, not only were pottery and stone tools necessarily traded through different exchange networks, so that pots were not exchanged for stone tools,¹³²⁶ but these two groups of objects were also valued differently, although they could both be considered as subsistence items. The archaeological record at Late Neolithic Platia Magoula Zarkou, showing an abundance of locally produced pottery and scarcity of stone tools, nevertheless demonstrates that the two different standards of value – one applicable to pottery and the other applicable to stone raw material and finished tools – allowed for the occasional conversion between the two different spheres of exchange. The question of whether or not women represented a third sphere of exchange at Platia Magoula Zarkou must remain unanswered for the time being (see Tab. 19), especially in view of Godelier's convincing argument about the non-universality of exchanging women.¹³²⁷ Meanwhile, the Late Neolithic house model buried at Platia Magoula Zarkou falls outside of these spheres of exchange, i.e. belonging to the sphere that was kept and not given away, as the so-called 'sacred object'.¹³²⁸

¹³²⁵ For a distinction between 'prestige goods' and 'precious goods' see Chapter VII. Stone tools *per se* cannot be associated with the prestige sphere as they are needed for everyday work like harvesting. However, given their foreign, interregional and rare origin, honey and chocolate chert as well as Melian obsidian can be classified as 'precious goods'.

¹³²⁶ Perlès – Papagiannaki 2022.

¹³²⁷ Godelier 2018.

¹³²⁸ Godelier 1999; Godelier 2011, 193.

Chapter Summary and Conclusion

In this chapter, I have shown that Platia Magoula Zarkou was not only one of the nodes of the regional exchange of pottery, but also that these nodes were necessarily socially embedded through either marital or non-marital transactions and exchanges, within as well as between groups, in different regional exchange spheres. As women were most likely the potters, they transmitted the potting knowledge within the household to their daughters, who learned how to procure clay, prepare a recipe, mould a pot, and decorate it according to their father's respective group. After marriage, a bride would move to her husband's house, and regardless of whether this was within or outside her village of origin, she could make use of her potting skills – but needed to learn new decorative patterns, most likely from her mother- or sisters-in-law. This was also a common practice among the Wanigela and has been documented ethnographically in several potting villages in Collingwood Bay. There, pots served not only as necessary kitchen utensils but also as a marker of group membership and identity, and as an item of regional exchange. At Late Neolithic Platia Magoula Zarkou, the locally produced pots and locally/regionally available chocolate chert belonged to a specific sphere of exchange within the multi-centric regional economy, distinct from inter-regionally exchanged honey chert and Melian obsidian stone tools.

At Platia Magoula Zarkou, pottery making does not appear to have been a choice but rather a necessity, and most likely a significant identity marker for both women and men. This is an important parallel with the Wanigela, who claimed that 'this is what Wanigelans do'. Possibly this was also what dwellers close to the Pineios River did (among other daily tasks, of course) during the Late Neolithic. I have already shown in the previous chapter that animal breeding changed significantly between the Late Neolithic and the EBA periods at Platia Magoula Zarkou. Yet the two main sources of material for stone tools – obsidian from Melos, chocolate and honey chert from the Pindus mountain range – and their respective exchange networks did not change significantly from the Late Neolithic to the EBA. Therefore, it appears likely that at least two different spheres of exchange, one linked to *local subsistence items* (e.g. pots) and the other to *regional subsistence items/precious items* (e.g. stone tools), persisted from the Late Neolithic into the Early Bronze Age.

With reference to the Late Neolithic house model found at Platia Magoula Zarkou, this chapter ethnographically challenged previous claims that this set of evidence necessarily proves that women were possibly more powerful than men inside and outside the house.¹³²⁹ By contrast, this chapter showed that neither this unique find nor the ethnographic record can support such a claim under these specified sedentary farming conditions. Instead, the house model may have depicted either an inverse, symbolic reality, or a so-called 'anti-structure'. The house model could also be perceived as an act of resistance, which showcases that hierarchies were also questioned and contested at Late Neolithic Platia Magoula Zarkou. Regarding gender relations at Late Neolithic Platia Magoula Zarkou, anthropological insights into the house model support the more probable interpretation that women saw themselves and were appreciated by others as the 'centre of the house' in local patrilineal contexts. This would not be possible without distinct female skills (e.g. pottery production), which were crucial for regional and local gift, barter, and marriage exchange.

Finally, scholars of prehistory are confronted here with acephalous societies that generated surpluses without the emergence of inherited social inequalities.¹³³⁰ This goes against the grain of neoevolutionary predispositions (e.g. that a surplus necessarily leads to social inequality). However, these scholars are encouraged to consult ethnographic accounts of big man societies in Melanesia, which serve as relevant and widely discussed examples of competitive

¹³²⁹ Risch 2018.

¹³³⁰ As proposed by Risch 2018

yet cooperative affluent societies. Absorbing and applying their conceptualization as ideal-type models could prevent some erroneous perceptions of female and male tasks, duties, and responsibilities in acephalous affluent societies. I respect Risch's¹³³¹ irritation with 'ethnographic tyranny', yet cannot overlook that his reference list for acephalous societies dismisses the critical body of anthropological literature published after *African Political Systems*,¹³³² Sahlins's *Stone Age Economics*,¹³³³ and Clastres's *Societies Against the State*,¹³³⁴ which were integrated into his bibliography.

As a final point of discussion, this chapter demonstrates that firstly, already during the Late Neolithic in the Thessalian plain, households developed social and economic relations with other households inside their settlements and elsewhere in the region. Secondly, beyond their primary subsistence activities, these settlements were all *a priori* entangled in regional social networks embedding regional economies. As can be seen from Late Neolithic Thessaly, these regional economies included unevenly distributed centres of craft specialization that were integrated into their local settlements and their respective Domestic Mode of Production (DMP). Thirdly, it would be difficult to claim that the DMPs at these Late Neolithic and later Bronze Age sites were strictly 'domestic' as domestic economies were, in all cases, already socially embedded into regional economies. I argue that these three concluding points indicate a structural setting of commonalities between these non-state, small-scale societies and the state civilisations which later emerged in the Near East – their households were not only embedded in the so-called domestic but also in regional or supra-regional economies.

¹³³¹ Risch 2018.

¹³³² Fortes – Evans-Pritchard 1940.

¹³³³ Sahlins 1972.

¹³³⁴ Clastres 1974.

VII. Regional Economies at the Dawn of Accountancy and Metrology: Tracing Local, Regional, and Supra-Regional Exchanges from the Archaeological Records at Çukuriçi Höyük

‘To be sure, throughout history, there have always been some societies that have resisted change; but to resist is already to change. And many forms of resistance have not managed to prevent change.’
Maurice Godelier¹³³⁵

Introduction

This chapter elaborates the central thesis that since the Neolithic, households have been not only embedded in the so-called domestic economies but simultaneously in regional and inter- and supra-regional economies. This claim is supported by looking at three spheres of exchange evident at Çukuriçi Höyük. These three spheres of exchange comprise the local sphere through on-site exchange between households, regional exchange within the Aegean basin, and long-distance, supra-regional trade with the Near East. Based on these three different scales of analysis, it can be concluded that at Çukuriçi Höyük gift exchange, barter within a wider region, and occasional trade with distant Mesopotamian polities coexisted. But whereas dwellers at Çukuriçi Höyük relied heavily on obsidian from Melos, other regional sites established stronger contacts to the eastern polities, which can be seen from the higher amount of central Anatolian obsidian at those sites. The later sites flourished during the EBA 2 period as the major trading ports, whereas Çukuriçi Höyük was abandoned at the end of the EBA 1 period. Dwellers at Çukuriçi Höyük were seemingly cut off from these exchange networks as well as from the emulation of chiefly elites to the east and west. Instead, they resisted the accumulation of goods or knowledge within a certain household until dwellers abandoned the site. Resistance to elite-emulation in the Aegean at the dawn of the EBA 1 was, therefore, a strength but also a weakness for dwellers at Çukuriçi Höyük that detached them from this site and its lands, fields, and houses that were the arenas of daily practices, knowledge, and local symbolic thought.

VII.1. Prioritizing Transaction over Transmission

In the first section of this chapter, the importance of *bartering*, *giving*, and *keeping* is not only stressed as an economic practice but as a combination of three (socio-economic) processes that bring societies into being. However, within the literature on the prehistoric Aegean, the discourse mainly follows the emergence of prestige goods and regional connectivity in pursuit of a 1970s tradition.¹³³⁶ Interest in connectivity and supra-regional exchange in the Aegean have persisted since then. This can be easily demonstrated through obsidian, metal, and

¹³³⁵ Godelier 2018.

¹³³⁶ Friedman – Rowlands 1977.

pottery exchange. In this chapter, I follow that trend to discuss the evidence for exchange on the local, regional and supra-regional scale, with the hindsight of the importance of keeping and transmission. By prioritizing transaction over transmission in this chapter, I also try to highlight practices of keeping and transmission, to complement this trend. It is, furthermore, important to note that bartering, giving, and keeping do not occur only in the communal sphere. On the contrary, it is a practice that sprouts bottom-up, within and between households, as highlighted in this chapter's first section.

The political economies of non-state societies, studied through either ethnographic or archaeological methods, are based around the transaction of prestige goods. Within socio-cultural anthropology, the exchange of prestige goods has been a topic of study since Malinowski's *Argonauts of the Western Pacific*¹³³⁷ and Mauss's *The Gift*.¹³³⁸ Within prehistoric archaeology, the *prestige goods economy* model, developed by the anthropologist Johnathan Friedman and the archaeologist Michael Rowlands,¹³³⁹ modified for archaeological purposes, had a considerable impact on our understanding of Bronze Age political economies in the Mediterranean and temperate Europe.¹³⁴⁰ In general, ceremonial exchanges of prestige objects as gifts – such as *kula* (a reciprocal network of delayed gift exchanges that operated between Trobriand Island chiefs) or the notion of *hau* among the Maori – enjoyed significantly more academic attention than *gimwali* – the non-ceremonial exchange of everyday goods between neighbouring coastal and hinterland Trobriand villages (barter). In the past, anthropologists even argued for a distinction between societies based primarily on gift-giving or a prestige goods economy on the one hand, and societies with commodity exchange on the other. However, follow-up studies showed that both gift giving and barter or commodity exchange coexisted in the majority of non-state tribal societies,¹³⁴¹ and in fact continue to coexist in societies primarily dependent on market economies.

Although gift and commodity exchange, as two ideal types of exchange, intersect and diverge in many ways,¹³⁴² for the purposes of this study it is important to note the primary distinction between them: 'gift exchange establishes a relation between the transactors, while commodity exchange establishes a relation between the objects transacted'.¹³⁴³ This implies that in the case of gift exchange, the two parties involved are in a state of reciprocal interdependence,¹³⁴⁴ whereas in commodity exchange, they are in a state of reciprocal independence. A delayed exchange of the same objects or the simultaneous exchange of different gift objects within a ceremonial setting creates moral and social indebtedness between the two transacting groups, which can be recognized by an appropriate return at a later date.¹³⁴⁵ An external measure of weight or volume in gift exchanges is, therefore, neither necessary nor desirable. Both parties involved in this exchange rely on indebtedness and the social bonds that link them through giving, receiving, and reciprocating.¹³⁴⁶

The absence of an external measure may also apply to commodity exchange: usually different types of objects or services are exchanged for one another through an internal balance, without money or any external criterion for mediating value.¹³⁴⁷ However, in this type of exchange, goods can also be compared beyond their utility for receivers, such as in terms of

¹³³⁷ Malinowski 1922.

¹³³⁸ Mauss 1990 [1925].

¹³³⁹ Friedman – Rowlands 1977.

¹³⁴⁰ Barrett 2012; Galaty 2018.

¹³⁴¹ Firth 1967; Godelier 1972; Carrier 1992.

¹³⁴² Appadurai 1986, 3–63.

¹³⁴³ Gregory 1982, 42.

¹³⁴⁴ Strathern 1988.

¹³⁴⁵ Gregory 1982, 47.

¹³⁴⁶ Mauss 2006 [1915].

¹³⁴⁷ Humphrey – Hugh-Jones 1992, 8; Gingrich – Schweitzer 2014, 28.

Commodity	
Production focused approach Marx 1867	Objects are produced in order to sell them in market transactions (production for exchange) rather than in order to consume them (production for use) Market economy and a substantial division of labor is a necessary precondition
Transaction focused approach Mauss 1990 [1925] Gregory 1980; Gregory 1982 Appadurai 1986 Strathern 1988 Carrier 1995	Impersonal transaction between strangers Lack of enduring relations between the transactors (producer and receiver, possible middleman) A commodity may become a gift and a gift may become a commodity (depending on the social relations between transactors)
Consumption focused approach Miller 1987	Objects are produced in order to sell them in market transactions Commodity production is impersonal Consumers ascribe meanings to objects based on the social relationships in which the commodities are consumed

Tab. 20 Different understandings of commodity exchange within socio-cultural anthropology (after Carrier 2018)

volume (e.g. baskets, pots) or other predefined quantities through production (e.g., the size of an oven determines the size of a salt bar). Barter or commodity transaction is possible only when two parties agree to exchange. Apart from *silent exchange* – a type of commodity exchange in which trading partners avoid each other at all costs but barter goods through mutual agreement, which has been observed among mobile hunter-gatherer groups – face-to-face interaction is necessary, either with or without a middleman, between transacting partners for all more or less sedentary groups. An important commonality between the two types of exchange, then, is that in both cases (i.e. gift or barter exchanges), among more or less sedentary trading partners, transacting groups necessarily engage in face-to-face relations. Given that the term commodity can be used in at least three different ways within the anthropological literature, here commodity is understood through a transaction-focused approach.¹³⁴⁸ In this case, commodity refers to an impersonal transaction between strangers, with a lack of enduring relations between transactors, and an understanding that the same items can be exchanged as either gifts or commodities: yet this depends on the social relations between the parties to the transaction (see Tab. 20).

More recently, a large body of anthropological literature has questioned the sharp theoretical differences between gift exchange and barter/commodity exchange,¹³⁴⁹ since such a distinction cannot always be clear-cut on empirical grounds.¹³⁵⁰ However, it seems necessary to make use of established conceptual and analytical distinctions between gift and barter/commodity,¹³⁵¹ and even more nuanced understandings of the exchange of objects or services, such as *generalized*, *balanced* and *negative* reciprocity,¹³⁵² for analytical purposes within prehistoric archaeology, where both the social organization and the economic system can often be inferred from a rather restricted data set.

In the recently published volume on *Regional Approaches to Society and Complexity: Studies in Honor of John F. Cherry*, the prehistoric archaeologist Michael L. Galaty favoured the use of comparative ethnoarchaeological analogies to prehistoric archaeological cases, by summarizing a changing approach in research on prestige goods within archaeology:

¹³⁴⁸ Gregory 1982; Appadurai 1986; Mauss 1990 [1925]; Mauss 2006 [1915].

¹³⁴⁹ Appadurai 1986; Humphrey – Hugh-Jones 1992; Angé 2018.

¹³⁵⁰ Humphrey – Hugh-Jones 1992; Angé 2018.

¹³⁵¹ Gregory 1982; Humphrey – Hugh-Jones 1992; Gingrich – Schweitzer 2014; Carrier 2018.

¹³⁵² Sahlins 1972.

‘Prestige goods have a checkered history in archaeology. Once they were in ... and now they are out ... , and the term was never very well defined ... What constitutes a prestige good? Answering this question depends to some large degree on whether or not we can determine how particular goods were valued by an archaeological society ... and what symbolic meanings they might have carried.’¹³⁵³

The majority of archaeologists would agree that in the archaeological record, prestige goods are usually those objects acquired from afar through long-distance trade,¹³⁵⁴ or valuable goods produced locally by specialists attached to chieftains.¹³⁵⁵ However, understanding the particular meaning of foreign prestige goods – found outside their place of origin or within a receiving community – remains a challenge if based on prehistoric data.¹³⁵⁶ In particular, the meaning of prestige objects, or what an anthropologist would call the ‘social life of things’¹³⁵⁷ may vary between the two communities.¹³⁵⁸ Opinions about whether prestige goods are a useful analytical tool therefore remain mixed. Whereas some maintain that ‘the application of the model of a prestige goods economy in the analysis of Bronze Age political structures applied to so much of temperate Europe might usefully be abandoned’,¹³⁵⁹ others continue to argue that a ‘careful study of extant prestige-goods exchange systems ... can elucidate features of archaeological prestige-goods exchange systems ... by circumscribing issues of theoretical importance.’¹³⁶⁰ Both these arguments are valid. However, to continue to use the analytical tool of prestige goods usefully within prehistoric archaeology, there are some theoretical implications to be addressed. Prestige goods are not always coterminous with gifts, and cannot be classified as only those objects produced by specialists. Objects that circulate within a village or between kinsmen as gifts could be transacted as a commodity with distant kin or non-related trading partners.¹³⁶¹ Further, prestige goods can be differentiated from so-called *precious objects*,¹³⁶² which are not limited to centralized chiefdoms but likewise exist in big man and great man societies. In the latter case, precious objects, such as salt bars among the Baruya, were not associated with conspicuous consumption and signatures of different rank or status: they were precious because salt was scarce, yet essential for human existence, and it had a ritual significance and exchange value.¹³⁶³

By returning to the study of *kula* in the Trobriand Islands, Annette Weiner highlighted the importance not only of movable objects of prestige, but equally the concept of *inalienable possessions*, through the principle of keeping-while-giving. Recently, Godelier argued that in all societies, which includes prestige goods economies, commodity and gift exchange neither produces society nor reproduces political economy:

‘Three bases and three principles must be combined. There must be certain things that are given; others that are sold or bartered; and still others that must be kept for ever ... It is because these three operations – selling, giving and keeping – are not the same that objects in these contexts are presented respectively as alienable and alienated (commodities), as inalienable but alienated (gift objects), and as inalienable and unalienated (sacred objects).’¹³⁶⁴

¹³⁵³ Galaty 2018, 75.

¹³⁵⁴ Friedman – Rowlands 1977; Earle 2002, 294–297; Galaty 2018.

¹³⁵⁵ Earle 2002, 296.

¹³⁵⁶ Galaty 2018, 75.

¹³⁵⁷ Appadurai 1986.

¹³⁵⁸ Galaty 2018.

¹³⁵⁹ Barrett 2012, 14.

¹³⁶⁰ Galaty 2018, 89.

¹³⁶¹ Bohannan 1959; Godelier 1972; Carrier 1992.

¹³⁶² Godelier 1972.

¹³⁶³ Godelier 1998, 422.

¹³⁶⁴ Godelier 2011, 193.

By shifting the focus away from objects of exchange, Godelier maintains that these three principles – selling/bartering, giving, and keeping – are not particular to tribal societies, such as the Baruya, but are also common within market economies, where not all things are for sale (e.g. a family album, or a main cathedral).¹³⁶⁵ Godelier traces the anthropological tendency to underplay the importance of transmission (of sacred objects) to the popularization of *The Gift*. However, from Boas's ethnographic accounts of the Kwakwaka'wakw sedentary hunter-gatherer-fisher society Mauss understood that the Kwakwaka'wakw distinguished between two types of copper objects, ones to give and others to keep:

'It would seem that among the Kwakiutl¹³⁶⁶ there were two kinds of copper objects: the more important ones that do not go out of the family and that can only be broken to be recast, and certain others that circulate intact, that are of less value, and that seem to serve as satellites for the first kind. The possession of this secondary kind of copper object doubtless corresponds among the Kwakiutl to that of the titles of nobility and second-order ranks with whom they travel, passing from chief to chief, from family to family, between the generations and the sexes. It appears that the great titles and the great copper objects at the very least remain unchanged (stationary) within the clans and tribes.'¹³⁶⁷

Such a distinction between things to give, sell, and keep, although not analysed as such, was also described for Trobriand chiefdoms. At Omarakana, a hinterland village on Kiriwina Island, yields from the same household plots were separated into three categories. Larger yams were used as ceremonial gifts for chiefs and kinsmen, smaller ones for household consumption and to barter for fish, and some were kept for the future harvest.¹³⁶⁸ This indicates that an interplay between political economy and nature dictated the necessary distinction between different bodies of goods produced within a single Trobriand household. Adopting the substantivist language of Polanyi's disciple Dalton,¹³⁶⁹ Timothy Earle also referred to prestige goods as primitive valuables¹³⁷⁰ or primitive wealth, which in non-state societies can be used as a means of payment and a store of value. These objects have included pig tusks and large stones in lowland Papua New Guinea, salt in the Papua New Guinea highlands; copper shields among Kwakwaka'wakw; cows in East Africa;¹³⁷¹ shell necklaces and armbands transacted through the *kula*, as well as ceremonially transmitted yams in the Trobriand islands,¹³⁷² and ibex horns in South Arabia.¹³⁷³ However, these prestige objects can be divided into prestige goods and precious objects or primitive valuables with reference to the political economy. Both types of objects can be exchanged either as gifts or commodities – in which commodity is understood through a transaction-focused approach¹³⁷⁴ – or can be kept and transmitted within a household.¹³⁷⁵ This is the analytical background for posing a question: what social relations, which always codepend on the social distance between trading partners, can be inferred on a local, regional, and supra-regional scale from the archaeological records at Çukuriçi Höyük?¹³⁷⁶

¹³⁶⁵ Godelier 2011, 419.

¹³⁶⁶ Kwakiutl is the common name for the Kwakwaka'wakw in socio-anthropological literature. The Kwakwaka'wakw resided on Vancouver Island in British Columbia, today part of Canada. They spoke the Kwak'waka language and belonged to different tribal groups at the time of European contact in 1786.

¹³⁶⁷ Mauss 1990 [1925], 165; Godelier 2011, 419.

¹³⁶⁸ Malinowski 1935, 67.

¹³⁶⁹ Dalton 1982.

¹³⁷⁰ For a detailed overview of such primitive valuables in pre-state societies, see Earle 2002, chapter 2.

¹³⁷¹ Evans-Pritchard 1940.

¹³⁷² Malinowski 1922; Malinowski 1935.

¹³⁷³ Gingrich 2017a.

¹³⁷⁴ Gregory 1982; Appadurai 1986; Mauss 2006 [1915].

¹³⁷⁵ Godelier 1972.

¹³⁷⁶ The debate here refers only to Çukuriçi Höyük as the record at Platia Magoula Zarkou has not pointed towards any links to the Near East. For regional and supra-regional exchange at Platia Magoula Zarkou, see Chapter VI.

To tackle such questions, this chapter separates the data into three distinct scales of analysis – local, regional, and supra-regional. The indicators of exchange will be analysed in the given order. The local scale refers to indicators of exchange and sharing on site, geographically limited to several rooms at Çukuriçi Höyük and its immediate landscape. The regional scale refers to a geographically extended region, including coastal and hinterland sites in western Anatolia, contemporary to EBA 1 at Çukuriçi Höyük. The supra-regional scale refers to indicators of trade beyond western Anatolia, dealing with indicators of trade with early Near Eastern states, found at Çukuriçi Höyük. For analytical reasons, these scales are determined geographically, which vaguely corresponds to a recent scale classification defined by stone tool specialists.¹³⁷⁷ However, in terms of social relations, we can distinguish between three different forms of interactions corresponding to the geographic scales: 1) overall face-to-face relations on-site, between dwellers at the site on a local scale; 2) limited regional face-to-face interaction, confined to a few persons on a regional scale; and 3) even more restricted face-to-face interaction on a supra-regional scale, in which groups may not come into any direct contact but may acquire goods from far away through down-the-line trade and, most likely, through intermediaries such as merchants.

Questions such as what things were *given* between close partners, *bartered* between strangers, and necessarily *kept* within households for reproduction, and what kind of social relations can be inferred from those transactions or transmission practices at the dawn of EBA 1 in the Aegean basin, will guide the current analysis. If, and how, did the emergence of early states in the Near East influence smaller societies on the fringes of Aegean basin at the time when an ‘*Age of Accountancy and Metrology* had started’?¹³⁷⁸

VII.2. The Local, On-Site Exchange at Çukuriçi Höyük

In this chapter, sharing between households at Çukuriçi Höyük is addressed through zooarchaeological data. This section shows that households at Çukuriçi Höyük shared the meat of large animals, such as beef and venison through generalized reciprocity, through which members could reinforce kinship and other social ties with other members at the site. Based on this outcome, it could be concluded that households at Çukuriçi Höyük may have been equal to each other not only in terms of metalworking as a ubiquitous domestic craft but also in terms of food consumption and access to meat from large animals such as cattle. As the second part of this section highlights, there is no reason that such ‘egalitarian’ social relations were also maintained within households. In this case, I draw from a detailed description of the Telefomin, a great man society in Papua New Guinea, where differences in diet between men and women were enormous. Applying this insight to the archaeological record indicating equal, *generalized reciprocity* of meat at Çukuriçi Höyük, it remains important to highlight that enormous inequalities regarding meat consumption may have existed during the Early Bronze Age at Çukuriçi Höyük.

Drawing on the analysis in previous chapters, Çukuriçi Höyük can be understood as a face-to-face village community, comprising no more than about 400 members, who within a wider region of western Anatolia specialized in arsenic copper production. I have already argued in Chapter IV that these metalworking craftspersons of a *generalized craft integration* type were, at the same time, farmers and artisans, possibly both male and female. This implies that metalworking, like farming, was an integral part of the DMP during the EBA at the site. In the absence of a central – let alone monumental – building, metal was produced within homes scattered across the site. Metalworking was not detached from, but was integrated into

¹³⁷⁷ Kandel et al. 2016; Schwall et al. 2020.

¹³⁷⁸ Rahmstorf 2016, 258.

other everyday practices. Most likely this unfolded on a seasonal, part-time basis, and only some minor differentiation between households could be observed regarding metal production and consumption at Çukuriçi Höyük. For the discussion of on-site economic activities, in this section I focus on the consumption of meat. In non-state societies meat was necessary for a group's reproduction, but was also an important indicator of distinction, possibly linked to conspicuous consumption or *haute cuisine*.¹³⁷⁹ Below, I will discuss whether and to what degree food, in particular meat, was shared between households at the site.

For an understanding of meat-sharing practices at Çukuriçi Höyük, I draw on the analysis of animal bones.¹³⁸⁰ According to Emra,¹³⁸¹ two distinct EBA archaeological phases at Çukuriçi Höyük – Phase IV and Phase III – showed remarkably similar statistical results when compared to each other. A total number of identified specimens (NISP) of 20,609 at Çukuriçi Höyük comprises the assemblage, which is rich in molluscs, domestic animals, and game. More than 50% of the NISP are molluscs, which provided less calorie intake than mammals. Among identified mammals, caprines are best represented in the NISP (64.2%), followed by cattle (13.3%), deer (12.6%), and domestic pig (4.5%). Among caprines, goats outnumber sheep in a ratio of 10:16 (sheep: n=152, goats: n=243).¹³⁸²

Comparative analyses of animal bones recovered from different rooms point to an intriguing conclusion for Çukuriçi Höyük: there is no significant statistical difference in the proportion of species between samples from different rooms, or between the overall assemblage from Phase IV to Phase III.¹³⁸³ Based on these analyses, none of the households could be identified as 'elite' households or households differentiated from others in terms of their conspicuous consumption of beef, pork, mutton, seafood, or venison, although room 43 provided a larger proportion of venison in comparison to other rooms. Culling profiles analysed in different rooms, including room 53 discussed below, and the overall patterns of butchering also seem to resemble each other. Most of the caprines at Çukuriçi Höyük were slaughtered between the ages of 2–6 months (approximately 35%), a significant proportion between 1–2 years of age (approximately 30%), and a negligible proportion at 0–2 months of age (approximately 12%), while less than a quarter of all domestic animals were slaughtered above 2 years of age (approximately 24%) (see Figs. 32 and 33). This implies that caprines at Çukuriçi Höyük were mainly killed for meat, and that the carcasses were butchered on-site, as all animal bones (including skulls and hoofs) were largely preserved on-site. The small size of caprines slaughtered at a young age indicates an established household-based meat consumption of roughly 6–10 people.¹³⁸⁴ Although a preference for tender meat-age among individuals is commonly understood with elite foods within zooarchaeology, Emra showed that slaughtering young animals was a by-product of a household-based consumption and herd management strategy, shared across the settlement. This practice of domestic animal slaughter overlaps with the 'Meat Type A' profile, which 'could correspond to domestic consumption, at the level of the family or 'household''.¹³⁸⁵

The record does not support the intensification of the local production of caprines, kept until old age, as an indicator of a family's status or competition between households, such as in the case of Melanesian big man societies. Competitive big man societies of Melanesia slaughtered older pigs in a communal ceremonial setting and tended not to slaughter younger pigs, to increase household wealth. This was practised to such an extent that ethnographers reported protein deficiency among big man groups. By contrast, the record of meat consumption

¹³⁷⁹ Goody 2000; Goody 2006.

¹³⁸⁰ The analysis of EBA animal bones was conducted by my Doc-team colleague, Stephanie Emra.

¹³⁸¹ St. Emra, pers. comm. 2019.

¹³⁸² Emra et al. 2020.

¹³⁸³ Emra et al. 2020.

¹³⁸⁴ After Halstead 2007, 28; Emra et al. 2020.

¹³⁸⁵ Helmer et al. 2007, 49.

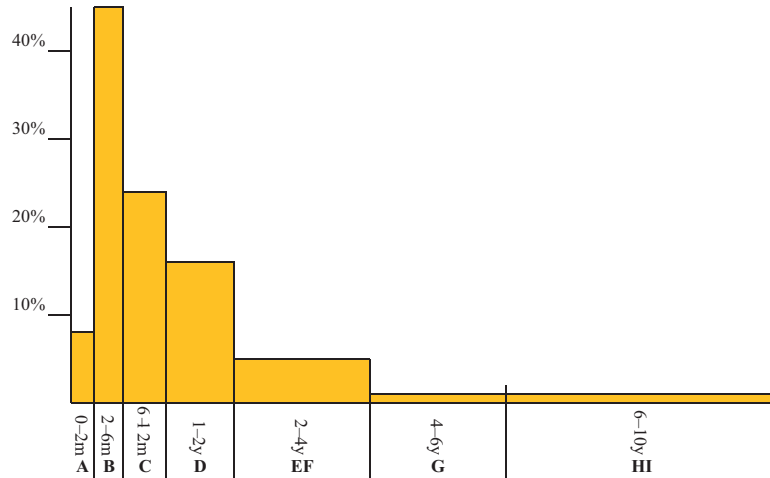


Fig. 32 Total caprine culling profile of EBA Çukuriçi Höyük MNI=34 (S. Emra)

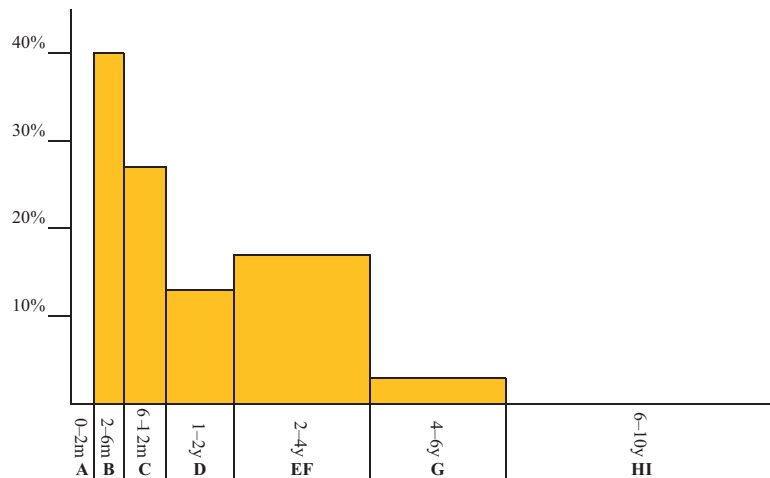


Fig. 33 Culling profile of Room 53, MNI=8 (after Emra et al. 2020)

at Çukuriçi Höyük resembles the practice reported among the Baruya, who distinguished two types of slaughter: *household slaughtering* for household consumption and the *communal ceremonial slaughtering* of pigs,¹³⁸⁶ without any intentional aging of animals. The fact that sheep were not commonly kept until old age at Çukuriçi Höyük implies that wool or woollen products at the site must have been acquired from elsewhere and not produced locally, which was also confirmed through analysis of textile technologies.¹³⁸⁷ This could establish a possible sphere for regional exchange.

Households at Çukuriçi Höyük were, however, not entirely dependent on the consumption of domestic animals: they also consumed game.¹³⁸⁸ According to zooarchaeological analysis, the remains of meaty bones, as well as antlers and hoofs, were also more or less homogeneously distributed throughout the site (see Fig. 34). Nevertheless, room 43 provided a larger assemblage of venison in comparison to other rooms, where its consumption was rather minimal.

¹³⁸⁶ Godelier 1986a.

¹³⁸⁷ Britsch 2018.

¹³⁸⁸ Emra et al. 2020.

Although room 43 appears to differ from other rooms in terms of venison consumption, neither its architecture nor its internal arrangements differ from the others. Within room 43 a central, superimposed hearth was found in two different use horizons. Close to the central hearth, metal objects were found (a needle, awl, metal fragment, and a wire), pointing towards metal production at the centre of the room. In the southwestern corner, another hearth was found in close proximity to a spindle whorl, which points towards textile production. In the northeastern corner of room 43, loom weights and a spindle whorl were found, again pointing towards textile production.¹³⁸⁹ In proximity to the hearths, tripod cooking pots were also found and most of the pottery finds consist of shallow bowls. Therefore, room 43 was interpreted as a multifunctional room with evidence for cooking (oven 48 and the shell pit), metal production (central ovens and metal objects) as well as textile production in the northeastern part of the room.¹³⁹⁰

Importantly, the higher amount of venison in room 43 does not overlap with differentiated architecture, which was observed for room 18. Room 18 was the only room with antae (the elongated front walls of the room) documented at Çukuriçi Höyük, which also provided evidence for metal and textile working as well as food preparation and consumption.¹³⁹¹ This result further supports a rather heterarchical organization at Çukuriçi Höyük, in which the successful hunter's household might have enjoyed more venison than other households, yet the hunter's success did not translate into other spheres (e.g. architecture, internal organization of the room), which could provide further evidence of on-site hereditary differentiation between households at Çukuriçi Höyük. This evidence corresponds to Maurice Godelier's concept of a 'great hunter' – based on talent and meritocracy – ethnographically observed among great man societies, rather than a redistributive economy and the seat of a chief.

Moreover, dwellers at Çukuriçi Höyük were not only prone to consuming hunted animals. They also transformed wild animal bones into useful bone tools, albeit in small numbers, and kept unworked antlers within houses, which was interpreted as being linked to ritual events.¹³⁹² According to anthropological literature, keeping antlers and other wild animal items could also signify hunters' special powers and, possibly, a sort of dominance of men over women. Given the deciduous nature of antlers,¹³⁹³ the latter could have been collected already shed and therefore not only display a hunter's success but also have a closer association with ritual practices or gender relations rather than solely social hunting ritual.

By referring to wider anthropological interpretations of domestic economies, we can derive further insights about on-site consumption at Çukuriçi Höyük. Firstly, let us examine the 'homogeneous assemblage' of animal consumption indicators on-site. On the one hand, this record indicates that stocks of animals were most likely owned by households, as well as butchered, prepared, and consumed on a household level. On the other hand, this implies that the meat of larger animals, which cannot be immediately consumed within a household (such as beef and venison) was necessarily shared between households on-site. Excessive amounts of cattle or deer remains, however, were not identified in any particular room. This could be due to established sharing between households, following a *generalized reciprocity* principle, which 'refers to transactions that are putatively altruistic, the transaction on the line of assistance given and, if possible and necessary, assistance returned', or what Malinowski called a *free gift*.¹³⁹⁴ Usually, this type of 'voluntary food-sharing among near kinsmen'¹³⁹⁵ can be observed within a hunter-gatherer camp or between households among more or less

¹³⁸⁹ Britsch 2018.

¹³⁹⁰ M. Röcklinger, pers. comm. 2019.

¹³⁹¹ Horejs et al. 2017.

¹³⁹² Horejs – Galik 2016.

¹³⁹³ Deer grow new antlers each spring and drop them in the autumn.

¹³⁹⁴ Sahlins 1972, 193–194.

¹³⁹⁵ Sahlins 1972, 194.

sedentary societies. *Sharing* between members of a camp or the same household creates a feeling of indebtedness with the receiver; however, the need for return is never implied, but is socially inscribed. The assemblage at Çukuriçi Höyük therefore implies with some certainty that the *generalized reciprocity* of hunted game, e.g. sharing venison, raising large domestic animals and sharing their meat, was established between households – most likely between close relatives.

As Sahlins noted, *generalized reciprocity* or *pure gift* was not limited to the ‘egalitarian’ hunter-gatherers, but was also common among big man societies such as the Siuai, as well as the Tikopia and Trobriand chiefdoms, since ‘chiefly redistribution is not different in principle from kinship-rank reciprocity’.¹³⁹⁶ For example, Malinowski understood from the Kiriwinans that *urigubu*¹³⁹⁷ refers to three things: i) a marriage gift (from a husband to his sister’s husband), ii) a piece of land cultivated for *urigubu*, and iii) a piece of land cultivated for tribute to a chief, who is not necessarily a kinsman. In this case *urigubu* was one of the potential socially inscribed practices of *generalized reciprocity*, reflected in social and material terms, including the organization of land.

Among Trobriand Islanders, *urigubu* was the annual practice of distributing yams as gifts after the harvest. Yams were given from a husband to his sister’s husband as a gift, based on local rules of matrilineality. *Urigubu* created a chain network of horizontal one-sided gift-giving, as each family (a wife, husband, and children) gifted a portion of their surplus in tubers to the husband’s sister’s household after every harvest. While not being given anything in return from the yam-receiving household, the yam-giving household in turn received a number of yams from the wife’s brother. Although the number of yams given could vary, persons were morally obliged to give as many yams as possible. Trobriand chiefs accumulated their wealth through *urigubu*, as polygamous marriage was permitted for chiefs, who thus accumulated a considerably larger number of tubers through *urigubu* (from several wives’ brothers) than anyone else in the village or on the island. The practice of *urigubu* was based on the principle of matrilineal descent, yet dwellers at Çukuriçi Höyük were most likely not organized in matrilineal descent groups, as has already been discussed in Chapter III. Transactions such as *urigubu* using either domestic or wild animals do not seem to point to the existence of elite or chiefly dwellings at the site, since there were no rooms in which evidence of excess animal food or game – either stored (e.g. dried and salted meat) or consumed – was found. This also indicates a lack of *haute cuisine* at Çukuriçi Höyük. What, then, could be another possible explanation for dwellers at Çukuriçi Höyük sharing food beyond a household and the neighbourhood?

According to a comparative cross-cultural sample, food sharing among societies based on a subsistence economy is a cultural universal, but may vary considerably with the degree of environmental stress.¹³⁹⁸ Firstly, the comparative analyses of these economies have shown that households facing a major environmental catastrophe tend to pool resources within the household, rather than sharing them beyond the household.¹³⁹⁹ This does not apply to Çukuriçi Höyük, as the pooling of goods solely within the household would necessarily result in the unequal distribution of game and large domestic animals across different households at the site, which was not observed. Secondly, the same study also argued that medium variability in food between households, in the absence of environmental stress, appears to be common,¹⁴⁰⁰ which, again, is not applicable to Çukuriçi Höyük. This may also indicate that environmental stress was not the reason for the abandonment of this site at the end of EBA 1. Thirdly, the cross-

¹³⁹⁶ Sahlins 1972, 209.

¹³⁹⁷ Malinowski 1935.

¹³⁹⁸ Ember et al. 2018.

¹³⁹⁹ Ember et al. 2018.

¹⁴⁰⁰ Ember et al. 2018.

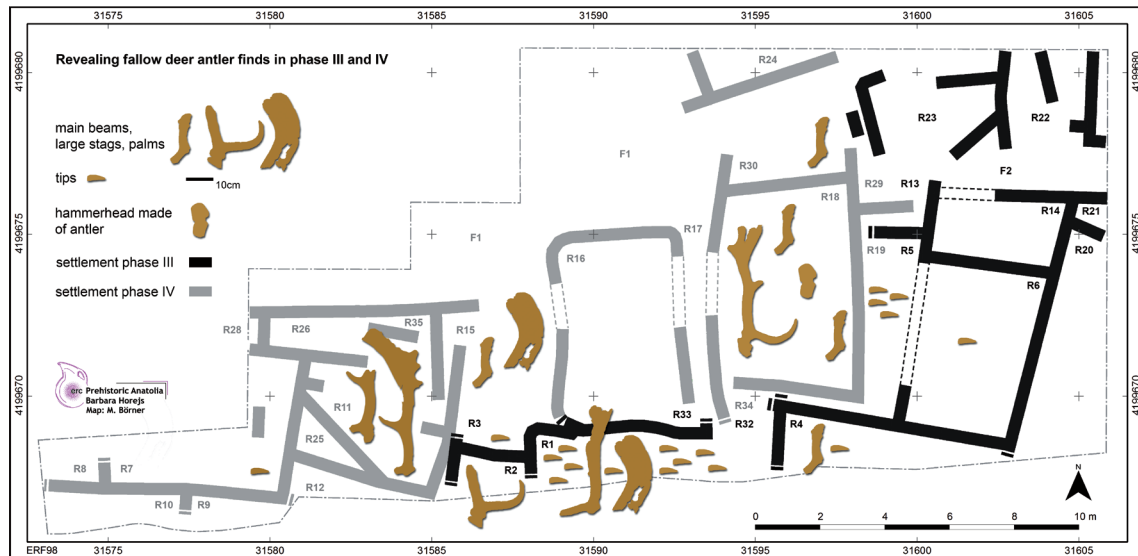


Fig. 34 Distribution of unworked deer antlers and a hammer made from an antler at Çukuriçi Höyük (Horejs – Galik 2016, pl. XCVIIIa)

cultural sample suggested that the largely homogeneous distribution of food (indicating an established practice of food sharing between households, such as was observed for Çukuriçi Höyük) is more common among societies in which frequent but non-hazardous environmental stress is common.¹⁴⁰¹ Scholars have previously argued that recurrent seasonal droughts must have also been common in prehistory within the Mediterranean basin,¹⁴⁰² which could then be understood as one among several possible motivations for the established, long-term practice of food sharing between households at Çukuriçi Höyük.

On the one hand, the homogeneous record of food sharing between households at Çukuriçi Höyük may indicate the occurrence of frequent yet non-hazardous environmental stress at the site during the EBA. On the other hand, environmental stress cannot be assumed to be the main and only reason for food sharing between households at Çukuriçi Höyük. Instead, the assemblage indicates that dwellers at Çukuriçi Höyük formed overlapping and cross-cutting networks of long-lasting social ties on a local scale, between households in the same village. The evidence shows that they practised *generalized reciprocity* (based on mutual agreement, e.g. ‘we give whenever we have – you give whenever you have’) of big game and large domestic animals, such as deer and cattle, though repetitive processes of gift-giving, a period of indebtedness, and reciprocity. These practices occurred both within and between households. Food sharing at Çukuriçi Höyük was most likely of high moral value, and did not result in the accumulation of wealth within a particular household. However, antlers were generally kept and possibly displayed within rooms (see Fig. 34), which may signify an inalienable trophy or token of ‘a great hunter’. Moreover, these items could also indicate differences between junior and senior and male and female members of a household. Yet, if food sharing between households at Çukuriçi Höyük was a norm during the EBA, what can be said about food sharing within households?

An archaeologically less visible but important point of departure for the analysis of the diet of dwellers at Çukuriçi Höyük concerns the possible variability of consumption within households. Numerous ethnographic cases report differentiated consumption practices according

¹⁴⁰¹ Ember et al. 2018.

¹⁴⁰² Halstead 1995.

Telefolmin A type of great man society in highlands Papua New Guinea						
	Young women (uninitiated)	Adult women (initiated, married)	Old women (initiated, married or widowed)	Young men (uninitiated)	Adult men (initiated, married)	Old men (initiated, married or widowed)
Cassowaries				x	x	x
Wild pigs					x	x
Terrestrial cuscus						x
Most marsupials	x	x	x	x		
Domestic pork						
Pandanus						x
Red yams					x	x
White yams			x			
Red bananas					x	x
Other types of bananas	x	x	x		x	x
Sugar cane						
Tobacco					x	x

Tab. 21 Differentiated consumption of game, domestic pork, and some vegetables among the Telefolmin (after Jorgensen 1991, 264–265)

to the season, but also between seniors, adult men or women, and children.¹⁴⁰³ Food taboos also appear to be common among most sedentary tribal societies, regardless of political (de) centralization.¹⁴⁰⁴ One example are the Telefolmin, a highland Papua New Guinean great man society, where the greatness of men was emphasized through initiation and warfare, but also gardening and hunting.¹⁴⁰⁵ Among the Telefolmin, the distribution of game depended on taboos associated with their consumption. All women, regardless of their age, were prohibited from consuming cassowaries and wild pigs, as well as all types of red vegetables and fruits (see Tab. 21). Rights to hunting were restricted to men due to local beliefs that menstrual pollution would cause the inability to see game if women were to participate in the hunt.¹⁴⁰⁶ Differences in food taboos were established among the Telefolmin along two lines: gender (male/female) and age set (young/adult/old), which corresponded to other life events such as initiation and marriage.

Due to the limitations of the available archaeological data, the actual differences in consumption within households at Çukuriçi Höyük cannot be analysed. However, statistically homogeneous on-site consumption of meat between households certainly generates biased results when compared to the ethnographic literature, which has shown that differences within households are universally present among most sedentary, non-state tribal groups. For this reason, inequalities of meat or vegetable consumption within the household, linked to local taboos, should remain a serious possibility for Çukuriçi Höyük at the dawn of the Bronze Age, when sharing between households was morally implied. Yet, in this regard, the archaeological

¹⁴⁰³ Godelier 1986a; Jorgensen 1991.

¹⁴⁰⁴ Leach 1976.

¹⁴⁰⁵ Jorgensen 1991, 264.

¹⁴⁰⁶ Jorgensen 1991, 264.

data may blur an understanding of certain inequalities regarding food consumption within each household at the site. Although the inequalities of food consumption within households cannot be addressed through zooarchaeological methods, it would be possible to look at this through isotopic analyses,¹⁴⁰⁷ which, due to the lack of human bones at Çukuriçi Höyük, is currently not possible.

VII.3. Regional Exchange in Western Anatolia

To better understand the off-site, regional system of exchange in EBA 1 western Anatolia, this section focuses on obsidian, which, due to its volcanic origin, is limited to a few sites within the Aegean basin and is therefore one of the best indicators of regional trade (see Fig. 35). This multi-purpose volcanic glass, used for the production of stone tools and weapons, was necessary for the group's reproduction. It is the best attested material exchanged over long distances across the Aegean basin between the Palaeolithic and the Bronze Age. Obsidian from the Cycladic island of Melos was recovered in high quantities from the EBA settlement of Çukuriçi Höyük. At this site, 60–70% of stone tools were made from Melian obsidian, which is also the best represented source of obsidian at Çukuriçi Höyük throughout its history, from the Neolithic to the EBA.¹⁴⁰⁸ This is of particular importance, since the 151km² Cycladic island of Melos is located approximately 280km west of Çukuriçi Höyük. In comparison, obsidian from Gyalı, located on a small island of that name approximately 80km south of Çukuriçi Höyük, was marginally (two pieces) attested at Çukuriçi Höyük.¹⁴⁰⁹ The record does not suggest that Çukuriçi Höyük was a Gyalı outlier: most of the obsidian used within the Aegean basin throughout prehistory in fact originated from two different sources at Melos,¹⁴¹⁰ whereas Gyalı obsidian was not widely attested.¹⁴¹¹ This was also the case for other coastal EBA western Anatolian sites, such as Bakla Tepe,¹⁴¹² Liman Tepe,¹⁴¹³ and Troy.¹⁴¹⁴ Explanations for such a dissemination are often confined to the physical qualities of sources: scholars argued that the obsidian from Gyalı was not pure – and therefore not of sufficient quality for the production of obsidian tools – whereas Melian obsidian was.¹⁴¹⁵

¹⁴⁰⁷ Human and animal bone remains were recently studied through the isotope analyses of carbon ($\delta^{13}\text{C}$), nitrogen ($\delta^{15}\text{N}$), and sulphur ($\delta^{34}\text{S}$) in bone collagen from over 200 individuals from Early Bronze Age layers in Anatolia (Irvine et al. 2019). However, this study does not take into the account the possibility that dwellers could have maintained a different diet despite the fact that they were born and grew up in a similar environment. Instead, different ratios of carbon ($\delta^{13}\text{C}$), nitrogen ($\delta^{15}\text{N}$), or sulphur ($\delta^{34}\text{S}$) are taken solely as markers of the different origins of the individuals examined and as the only possible explanation. The samples from these individuals are only compared to site averages rather than gendered or age ratios, which, I suggest here, is needed, since both gender and age may significantly influence dietary practices in non-state societies. For example: 'There are two individuals (both female) with clear outlying $\delta^{34}\text{S}$ values; one from Bademağacı, and one from Bakla Tepe. The female from Bademağacı has a $\delta^{34}\text{S}$ value of 11.9‰ which is 3.1‰ greater than the site average. The local range of $\delta^{34}\text{S}$ at the site has been estimated to be ca. 7–9‰ using the site mean and faunal values which plot close to the human mean values. This suggests that *she came from a region either closer to the coast, or one with sulphur enriched geology* (Vika, 2009). The female from Bakla Tepe has a $\delta^{34}\text{S}$ value of 7.4‰ which is 3.4‰ lower than the site average, suggesting a *potential origin further inland or from a sulphur depleted geological region* (Nehlich, 2015)' (Irvine et al. 2019, 261, emphasis mine).

¹⁴⁰⁸ Knitter et al. 2012; Knitter et al. 2013.

¹⁴⁰⁹ Milić 2018.

¹⁴¹⁰ Georgiadis 2008; Bergner et al. 2009.

¹⁴¹¹ Bergner et al. 2009.

¹⁴¹² Kolankaya-Bostancı 2016.

¹⁴¹³ Kolankaya-Bostancı 2016.

¹⁴¹⁴ Gatsov – Nedelcheva 2016.

¹⁴¹⁵ Matzanas 2000, 2; Georgiadis 2008.

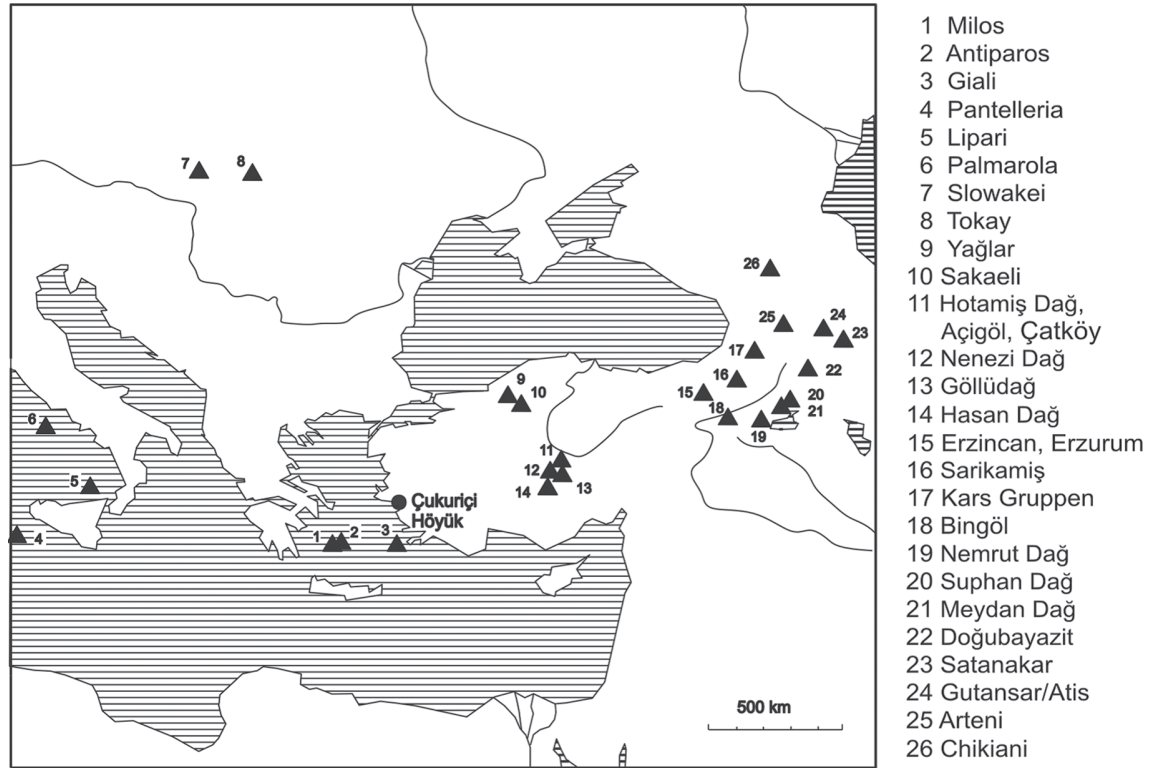


Fig. 35 Sources of obsidian within the eastern Mediterranean region (Bergner et al. 2009, Abb. 3)

In this section, the argument supports the contention that within the east Aegean and western Anatolian EBA 1 ‘cultural koine’, the evidence based on obsidian also supports the varying involvement of sites in the regional exchange of obsidian. Therefore, it remains important to stress the fact that households at these sites were also involved in the exchange of obsidian to different degrees. This section contextualizes the evidence relating to three different obsidian sources: Gyalı obsidian, Melian obsidian, and central Anatolian obsidian. Based on the insights into the distribution of Gyalı obsidian, it can be concluded that neither of these sites played a significant role in the exchange or procurement of Gyalı obsidian. Whilst this relates to the most localized resource among the three, proximity to obsidian sources was not a main criterion. Moreover, most of the other nearby regional EBA 1 sites in this ‘cultural koine’ relied on the Aegean obsidian exchange. However, their involvement in these exchanges varies starkly. During the EBA 1 period, Melian obsidian underwent a major transformation from a precious good to a prestige one. This transformation can be seen from other island sites within the koine, yet cannot be proven for Çukuriçi Höyük, where households shared access to obsidian across the site. The third and most significant piece of evidence that distinguishes Çukuriçi Höyük from other regional sites is the small amount of central Anatolian obsidian. Whereas at other regional sites such as Liman Tepe, Bakla Tepe, and Troy, central Anatolian obsidian was widely attested, this was not the case at Çukuriçi Höyük. This indicates that compared to other sites, Çukuriçi Höyük was more dependent on only one source of obsidian, the Melian obsidian. By contrast, other sites were already involved in multiple exchange networks of obsidian, in particular from the east in central Anatolia, complementing the Melian objects. In my conclusion, this is one of the main distinguishing features between Çukuriçi Höyük and other regional sites, and is a factor in the other regional sites’ longevity compared to the abandonment of Çukuriçi Höyük after the EBA 1 period. If households at other sites opened up towards the east, members of Çukuriçi Höyük households did not. But that only applies for obsidian, since evidence for trading with Near Eastern sites exists at Çukuriçi Höyük and will be discussed in the final section of this chapter.

A recent comparison between the wide distribution of Melian obsidian in contrast to the limited distribution of obsidian from Gyalı in the Aegean basin offered an alternative interpretation beyond the physical characteristics of the two volcanic stone sources. Gyalı resources, located on a small island with a surface area of 6km², could be easily defended by a local community, and therefore direct procurement of this obsidian was unlikely. By contrast, obsidian resources at Melos, an island with an area of 150km², was harder to defend. Therefore, for most of the Neolithic and until the beginning of the Bronze Age, obsidian sources at Melos were uncontrolled, and were more likely to be accessed by several non-local groups.¹⁴¹⁶ If this was the case, then what social relations between trading groups can be inferred from the assemblage at Çukuriçi Höyük?

Firstly, we can make several inferences based on the regional distribution of Melian obsidian in coastal and hinterland western Anatolia. Çukuriçi Höyük has already been identified as one of the *gateway communities* of the Melian obsidian trade. At this site, 60–70% of all stone tools recovered from Late Chalcolithic and EBA deposits were made of Melian obsidian, whereas the percentage declined at other contemporaneous, hinterland western Anatolian sites (e.g. Aphrodisias and Beycesultan).¹⁴¹⁷ At Bakla Tepe, obsidian first appears in Late Chalcolithic layers, most of it originating from Melos, whereas some pieces recovered originated from central Anatolian¹⁴¹⁸ sources at Göllüdağ.¹⁴¹⁹ However, at Bakla Tepe and Liman Tepe, unlike at Çukuriçi Höyük, flint stone tools predominated within the Late Chalcolithic and EBA 1 archaeological layers.¹⁴²⁰ At Bakla Tepe, less Melian than central Anatolian obsidian was found in the Late Chalcolithic layers, whereas the ratio of Melian obsidian compared to central Anatolian obsidian increased steadily during EBA 1. Authors have argued that, ‘It seems that in the wider Izmir region, central Anatolian obsidian was imported more in the Neolithic and Chalcolithic phases and less in the Early Bronze Age, but during the Early Bronze II period there was a sharp increase in central Anatolian obsidian again.’¹⁴²¹

The assemblage from Çukuriçi, however, does not support this claim, and indicates that even within the Izmir region, the level of embeddedness of different sites within obsidian exchange networks differed between sites during the Late Chalcolithic as well as the EBA. Çukuriçi Höyük, unlike other sites in the Izmir region, relied heavily on Melian sources during the Late Chalcolithic and EBA 1, whereas at Late Chalcolithic and EBA 2 Bakla Tepe, more central Anatolian than Melian obsidian was found. This implies that, in contrast to other sites, dwellers at Çukuriçi Höyük maintained special relations with the Cycladic island of Melos, be that direct or indirect, throughout the Late Chalcolithic and EBA 1 period.

Within the Aegean basin, proximal point analyses¹⁴²² suggest two possible maritime routes linking western Anatolia (Izmir region) with Melos.¹⁴²³ Due to an absence of sailboats before 2500 BC, Broodbank proposed that voyagers with rowing boats could travel distances of up to 20km per day, and therefore the two routes, inferred from the geographical proximity of the islands between Melos and the western Anatolian coast, are the most probable ones.¹⁴²⁴ Although the direct procurement of Melian obsidian remains an option, it appears more likely

¹⁴¹⁶ Georgiadis 2008.

¹⁴¹⁷ Knitter et al. 2012; Knitter et al. 2013.

¹⁴¹⁸ Central Anatolian obsidian can be interchangeably referred to as Cappadocian obsidian due to its provenance close to the modern town of Cappadocia.

¹⁴¹⁹ Kolankaya-Bostancı 2016.

¹⁴²⁰ Kolankaya-Bostancı 2016.

¹⁴²¹ Kolankaya-Bostancı 2016, 369.

¹⁴²² Proximal point analyses within the Aegean basin assigned the Cycladic Islands as nodes and the shortest distances between them as edges. This kind of analysis is based only on geographical proximity, and serves as a possible model for discussing the archaeological distribution of obsidian.

¹⁴²³ Agouridis 1997 in Broodbank 2000.

¹⁴²⁴ Broodbank 2000.

that trade of Melian obsidian during the EBA ‘was probably carried out by intermediaries, possibly through a systematic regular exchange network, rather than involving direct procurement from sources’.¹⁴²⁵ Given that the main point of interest here is not the precise models to explain the exchange of Melian obsidian but an understanding of social relations between dwellers at Çukuriçi Höyük and other regional communities, I will discuss further the type of regional transactions in which obsidian was involved.

Anthropological Contextualization of Obsidian Exchange

Like any other material or object transacted on a regional scale, obsidian cannot be understood as a *one-way transaction* if inspected through the lens of anthropological knowledge of regional inter-group transactions.¹⁴²⁶ Instead, it can only be understood through (minimally) *two-way* (though not necessarily symmetrical) *transactions*, including simultaneous reverse processes – be that gift or barter exchange of obsidian for another good. A similar factor was proposed by Goody for the exchange of early metals. He observed that ‘one of the difficulties with discussions of ‘exchange’ is that they often neglect this reverse process, but even the content of the transaction in favour of an abstraction privileging a notional symmetry, as suggested by Marcel Mauss.’¹⁴²⁷

Therefore, before proceeding to an analysis of the regional implications of obsidian exchange at Çukuriçi Höyük, I propose that the exchange of obsidian cannot be understood through an analytical analysis of obsidian on its own. Instead, it must be understood as part of a broader range of potential ‘exchange goods’, which may or may not have included key features of ‘primitive money’ as a more or less generalized means of exchange, due to its limited but enduring distribution as a highly desirable material across the prehistoric Aegean basin.

I do not agree with the argument that ‘the distribution of obsidian in western Anatolia indicates an interaction and procurement system like the other archaeological items, particularly pottery and metal’.¹⁴²⁸ At Çukuriçi Höyük, for example, copper/arsenical copper production¹⁴²⁹ and pottery¹⁴³⁰ were produced in situ from locally available raw materials, indicating less off-site connectivity and dependence on other sites. The reverse is true for obsidian. At Çukuriçi Höyük this was not available locally, and therefore dwellers at this site necessarily relied on supplies of raw or finished obsidian material from afar, either by procurement or exchange, implying a stronger dependence on regional economies. We can therefore draw an important analytical distinction between metal and pottery on the one hand, and the obsidian exchange at Çukuriçi Höyük on the other. In this case, obsidian should be considered as a non-local material acquired through down-the-line or long-distance exchange, in contrast to metals and pottery, which at Çukuriçi Höyük were produced from local sources in situ. Therefore, the exchange of obsidian through interaction and procurement systems cannot be regarded as analogous with metals and pottery at western Anatolian sites. Unlike pottery and metals (in particular arsenical copper) that could be produced locally at various sites, obsidian is geographically much more limited and therefore destined to follow different procurement strategies than pottery and metals.

The fact must be taken into account that by the beginning of the Bronze Age at Çukuriçi Höyük and other sites in the wider region, metal tools and weapons had not yet replaced the stone, bone, and wooden tools. Obsidian thus continued to be a necessary and highly desirable

¹⁴²⁵ Kolankaya-Bostancı 2016, 371.

¹⁴²⁶ Polanyi 1944; Sahlins 1972; Appadurai 1986; Mauss 2006 [1915].

¹⁴²⁷ Goody 2012, 7.

¹⁴²⁸ Kolankaya-Bostancı 2016, 231.

¹⁴²⁹ Mehofer 2014; Mehofer 2016.

¹⁴³⁰ Peloschek 2017.

material during the EBA.¹⁴³¹ Whether obsidian was treated as a prestige good during EBA 1 is questionable. Here, however, I argue that its distant origin (approximately 280km from Çukuriçi Höyük) and the reduced need for reproduction (obsidian is more durable than either copper or bone tools) qualify it to be classified – in some cases at least – as a prestige good. Moreover, it was certainly a *precious raw/finished material*. This argument can be supported with evidence from other regional sites, since the presence of Melian obsidian increased in the subsequent EBA 2 period at Bakla Tepe and Liman Tepe, whereas Çukuriçi Höyük was abandoned at the end of the EBA 1 period. Though a group of merchants from Çukuriçi Höyük could have travelled to Melos to procure the obsidian – which was technologically and geographically possible – it is more likely that dwellers at Çukuriçi Höyük relied on other groups to obtain obsidian, for which they needed to reciprocate in kind or services, i.e. in a *balanced or negative reciprocity* type of social relation.¹⁴³²

Although the inference of services remains challenging based on the available archaeological record, there is ample evidence that within the regional setting, dwellers at Çukuriçi Höyük possessed skills and items that could be exchanged for Melian obsidian. At Çukuriçi Höyük, these were copper objects made by specialized metalworkers – a skill that remained limited at other sites. Generalized village specialization in metalworking was a particularity of Çukuriçi Höyük, hence locally produced metal tools and weapons could be exchanged for obsidian from afar.

At least for Çukuriçi Höyük, the obsidian exchange does not resemble the *kula* network type of reciprocal gift-giving exchange through regional circles between chiefs in the Trobriand Islands.¹⁴³³ Firstly, objects exchanged within the Aegean basin were not exclusively non-utilitarian prestige goods (such as bracelets or necklaces within the *kula*) but were objects simultaneously necessary for everyday life, being, in fact, vital for the procurement of material conditions. Secondly, the distribution of either obsidian or metal objects was not limited to a particular room, but was scattered across the settlement. This stands in clear contrast to the distribution of *kula* valuables, which were limited to the chief's group. It appears that at Çukuriçi Höyük, households could exchange goods independently from any central authority, such as a chief (within *kula*, only chiefs could publicly wear exchanged prestige objects). Thirdly, unlike the established differences in the storage of food (the lion's share being owned by the Trobriand chief), local differences between households – linked to conspicuous consumption of meat or game as well as storage – were not confirmed at Çukuriçi Höyük: therefore, a central chiefly figure cannot be confirmed from the available archaeological record. Instead, the system of exchange at Çukuriçi Höyük resembles the long-distance trade network of stone adzes between the islands of Western Melanesia, documented at the beginning of the previous century:

‘Before the white men came to British New Guinea, stone adze blades were taken to the Gulf as articles of trade. The Motu got them from Koiari, and the Koiari are said to have got them from people further inland, and these from somebody else, but nobody here knows where they came from originally. The value of a large stone adze was equal to the value of a large toia. The Motu people have an amusing tradition of the origin of stone adzes. They say that only certain men among the tribe from whence they came were able

¹⁴³¹ Knitter et al. 2012, 362.

¹⁴³² Sahlins 1972, 194–196.

¹⁴³³ To some of my colleagues within socio-cultural anthropology, this might come as a surprise. During my participation at a PhD seminar at the University of Vienna's Socio-cultural Anthropology Department, my colleagues commonly regarded the long-distance redistribution of obsidian as of necessity being a *kula* type of transaction, linked with supra-regional trade and prestige. Among this audience, the *kula* type may be the most well-known type of such transactions, though it is not the only possibility for the wide distribution of ecologically circumscribed materials or objects.

to procure the adze blades. The way they procured them was by wading in the streams with a hand-net like a bushman's fishing-net. The stone adzes, ready-made, swam like fish, and they caught them in their nets. The Motu say that they have heard that it was easy to know a helaga stone adze catcher, because his legs were always covered with scars inflicted by the stone adzes when these were trying to evade the net.¹⁴³⁴

Amusing as the Motu story may be, it confirms the likelihood that the Motu did not need to travel to acquire green stone adzes. Instead, finished goods reached them through Gulf and Waima traders with whom the Motu needed to exchange a large *toia* – a valuable ornament – that served as primitive money between Melanesian islands. For example, Seligman reported that for a good canoe one would need to exchange 3–4 *toias*, whereas for a dugout it was two *toias*.¹⁴³⁵ Although the green stone adzes were not a marker of rank or status in the Melanesian islands, which was the case for ceremonial *kula* exchanges, adzes nevertheless travelled over long distances, without central chiefly control of the trade. The ratio between a *toia* and an adze being 1:1 implies that for the Motu both the non-utilitarian ornament and the utilitarian adze were equally desirable items. Drawing on this insight, it can be implied that during EBA 1, Aegean basin obsidian or metal should not be treated as a prestige good, but rather primarily as a utilitarian precious good. These utilitarian precious goods, such as obsidian and metal, took on the function of primitive money rather than being a marker of rank; the implications of this will become clearer from the ethnographic case of salt bars described below.

Salt Bar as a Gift, Salt Bar for a Stone Tool

A suitable ethnographic analogy for the regional exchange of obsidian, applicable to Çukuriçi Höyük at the dawn of the EBA, can be drawn from the exchange of salt bars between the tribal societies of the Baruya and their neighbours in the Papua New Guinea highlands. The Baruya are a sedentary group of about 2200 members (in 1979), scattered among 17 permanently occupied villages and hamlets of approximately 130 residents each, along two valleys at an altitude of between 1600 and 2300m.¹⁴³⁶ In terms of social organization, language, and material culture, the Baruya belong to a cluster of *Anga*-speaking groups, *Anga* as a term being used by linguists and anthropologists to differentiate them from other Melanesian language groups which are linguistically unrelated. Among all *Anga*-speaking groups, the term 'anga' signifies a 'house'¹⁴³⁷ (see Fig. 36).

Until shortly before Godelier's ethnographic present, the Baruya largely based their subsistence on Stone Age technology and were mostly dependent on local horticultural production of primarily sweet potato and taro, grown in forest clearings and irrigated gardens. They also raised domesticated pigs, gathered plants, and hunted for subsistence but also for politico-religious purposes. Unlike other tribes in the region, the Baruya specialized in the production of salt bars, processed from certain plants unique to their region. These bars of plant salt were a principal item of exchange with neighbouring tribes, through which the Baruya acquired items not available locally but vital for their own material conditions. None of the small tribal territories' residents in the New Guinea Highlands and their fringe were able to provide locally for all goods necessary for social reproduction. Goods local to the Baruya such as salt were non-local to neighbouring tribes, and vice versa. Hence they traded with each other. The Baruya, like other tribes in the region, were thus dependent on a 'full-blown regional economy'¹⁴³⁸ through which tribes could acquire items not available on their own territory but

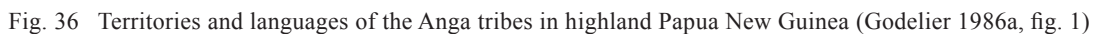
¹⁴³⁴ Seligman 1910, 115.

¹⁴³⁵ Seligman 1910, 93.

¹⁴³⁶ Godelier 1986a, 1.

¹⁴³⁷ Godelier 1986a, 1.

¹⁴³⁸ Godelier 1986a, 12.



Although it seems that all Baruya produced salt, this was not the case. Within Baruya villages, the division of labour was gendered. Male tasks included the production of salt, trade, hunting, and warfare, whereas women exclusively engaged in horticulture and pig breeding, which also served as a basis for men's control and power over Baruya women. Among men, differences in 'greatness' were observed in relation to their particular skills and ensuing reputation. Some men were 'great' because they were great warriors, other because they were great salt producers or hunters. However, all these great men (warriors, salt-makers, hunters, etc.) protected and produced for the whole residential unit – i.e. their respective Baruya village. Each Baruya village was organized in a similar manner. On a wider, supra-regional level, 'each local group specialized in the production or gathering of one or two products',¹⁴³⁹ which could then be exchanged hand-to-hand through commonly accepted procedures. Therefore, the division of labour between neighbouring tribes (e.g. stone tool producers, or salt producers)

¹⁴³⁹ Godelier 1986a, 12.

was much greater than within a tribe, since all villages belonging to the same tribe would have access to the same types of goods. Godelier noticed that ‘material necessity forced tribes into a trading network, and in turn imposed certain forms and limitations on political relations and warfare between the tribes’.¹⁴⁴⁰ These inter-tribal relations, based on regional exchange, differed fundamentally from those described elsewhere for others, such as the Nuer in southern Sudan. The Nuer were in a state of perpetual war with their tribal neighbours (the Dinka), in order to acquire new land and water for pasture for their cattle.¹⁴⁴¹ The Baruya, some of whom descended from refugees after some land was seized from the Andje a few generations prior to ethnographic observation, ‘found themselves at the centre of an extensive network of oppositions and alliances with their neighbours’¹⁴⁴² (see Fig. 37). Godelier describes these networks of relations as revolving around two poles:

‘On the one hand, they had permanent enemies, the Andje, whom they had driven from their territory and who represented the fixed negative pole in their intertribal relations. On the other hand, they maintained permanent relations of friendship and economic, and sometimes even military, cooperation, with the Yooundouye, a tribe not belonging to the Anga culture ... between these two opposing poles, we find all the tribes immediately adjacent to the Baruya, all of which belonged to the Anga culture, and which were all, at one time or another, either allies or enemies of the Baruya.’¹⁴⁴³

This interplay of hostile and friendly relations with neighbouring tribes not only shaped regional exchange, but also perpetuated the ‘greatness’ of Baruya men, who were initiated into the status of ‘great warriors’ that defended Baruya territory. Salt bars, which were produced communally within Baruya villages, represented a means of primitive money, which was at the same time a commodity (that could be exchanged for another commodity, without ritual significance), a gift (between kinsmen of the Baruya tribe), and a *currency* (having exchange value, which was agreed upon locally and regionally).¹⁴⁴⁴ Godelier argued that ‘*Very often* the precious objects we encounter in primitive societies have a *dual nature*: they are both goods and non-goods, ‘money’ and gifts, according to whether they are bartered between groups or circulate within the group.’¹⁴⁴⁵ Within Baruya villages (between neighbours and kinsmen) and between Baruya villages (between consanguine relatives or allies residing in different villages), salt was exchanged as a gift or a means of ritual exchange at birth, marriage, and death. These were established social principles, which could not be avoided since ‘the Baruya take great care to give back what they have received, not in order to expunge their debts, but in order to counterbalance the debts of others toward them’.¹⁴⁴⁶ With their trading partners residing

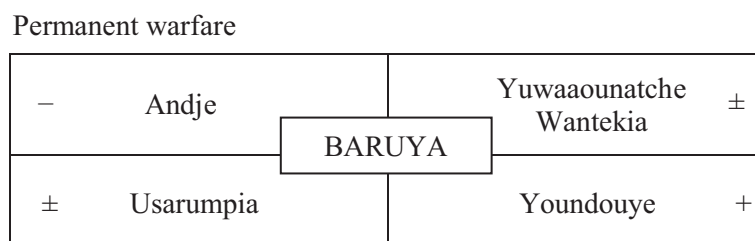


Fig. 37 Politico-military relations between the Baruya and neighbouring tribes (Godelier 1986a, fig. 9)

¹⁴⁴⁰ Godelier 1986a, 12.

¹⁴⁴¹ Evans-Pritchard 1940.

¹⁴⁴² Godelier 1986a, 104.

¹⁴⁴³ Godelier 1986a, 104–105.

¹⁴⁴⁴ Godelier 1972.

¹⁴⁴⁵ Godelier 1998, 399.

¹⁴⁴⁶ Godelier 1986a, 173.

outside Baruya tribal territory, the Baruya exchanged salt in commodity or barter transactions, in which a mutually agreed quantity of salt was exchanged for stone tools, feathers, shells, and other items that were necessary for the reproduction of each group involved in this commodity transaction. From this it is evident that salt, which among the Baruya had ritual importance as even its production required a sort of a ritual specialist, entered a new ‘social life’¹⁴⁴⁷ – a commodity phase – once transferred outside their own territory.

Despite its local production by collective means, among the Baruya salt was treated as a *precious item* and not a prestige good. Some of it was *kept* within houses and stored, some of it *gifted*, and the rest *bartered*. Seen as a *precious item* and a sacred object locally, among the Baruya salt

‘Is dear because it is a ‘luxury’ product and its production requires knowledge of technique and magic which other neighboring tribes do not possess. What the Baruya ask for and what their partners normally agree to pay for, is the *monopoly of a double rarity* – product and know-how.’¹⁴⁴⁸

Therefore, unlike the *kula* prestige objects, which at Kiriwina were non-locally produced goods that became intra- and inter-island signifiers of chiefly status rather than being crucial objects for daily subsistence reproduction, among the Baruya salt was a prestige good without signifying rank: it was a precious object, as Godelier defined it, for the following four reasons:

- 1) A precious object, because of a particular kind, because it enters, along with pigs, into the category of things ‘good to eat, yet scarce and essential’, i.e. meat and salt.
- 2) A precious object, because it is consumed exclusively during vital moments of social life: birth, initiation, marriage, i.e. within the framework of ceremonies and rites ‘celebrating’ them.
- 3) A precious product because its manufacture cannot be effected without the art of specialists who possess both technical skills and magical know-how in order to bring about its crystallization. In short, it is to the salt maker’s magical powers that salt-filled owners must turn if they wish to get that ‘white and heavy’ salt which other tribes covet and are ready to ‘pay’ a good price for.
- 4) A precious product, because, thanks to it, the Baruya can procure all that they lack, and which to them is necessary for subsisting (stone axes), protection from the cold (bark cloaks), adornment and finery (feathers, pearls), compensation for murder, initiation of their daughters and warriors (magic nuts), arming themselves, etc. Salt is therefore precious, because it allows the Baruya to overcome the limits of their resources, limits imposed by their ecology and economy.’¹⁴⁴⁹

The Regional Exchange of Obsidian within the Aegean Basin and its Hinterland

Taking the Baruya salt exchange as a loose blueprint for an analysis of obsidian and metal exchange at Çukuriçi Höyük, it is possible to outline an important similarity between the two spatially and chronologically distant contexts. Like the salt plants, which were geographically limited to the Baruya tribal territory, obsidian was also limited to a few specific locations within the Aegean region (see Fig. 35). Communities residing at either Melos or Gyali, as well as other places close to obsidian sources, could make immediate use of this raw material. These communities had the power to make informed decisions about with whom and how obsidian would be exchanged, even if procurement at Melos appears to have been less controlled than

¹⁴⁴⁷ Appadurai 1986.

¹⁴⁴⁸ Godelier 1998, 419.

¹⁴⁴⁹ Godelier 1998, 422.

at Giali.¹⁴⁵⁰ Given that Melian obsidian reached both ends of the Aegean Sea – the eastern Aegean coast to the west and the western Anatolian coast to the east – during the Palaeolithic, it can be seen that obsidian was also a rare commodity outside these locations during the Late Chalcolithic and the EBA, a time when many of the Cycladic islands were already colonized. The same also holds true for central Anatolian obsidian.

As most of the Cycladic islands were already settled by the beginning of the Bronze Age, this implies that reciprocal, down-the-line exchange of obsidian was very likely. Although some scholars argued that ‘the advantage held by people at key locations on the fringes of the Aegean who could intercept and control exotica entering the region must have become increasingly apparent through the course of the third millennium BC,’¹⁴⁵¹ this interpretation underplays the wide distribution of Melian obsidian prior to this period. Thinking of obsidian as a precious raw material or items outside as well as within its points of origin, which were traded in *key locations*¹⁴⁵² or *gateway communities*,¹⁴⁵³ generates an analytical value. Through such analyses, the key nodal points of an obsidian exchange network can be identified. Alongside this understanding, however, scholars should also consider that these gateway communities could only acquire obsidian through the reciprocal exchange of goods that were locally produced. These reciprocal exchanges of local goods for non-local objects then stimulated a long-lasting system of regional exchange within the Aegean basin.

Çukuriçi Höyük has already been identified as such a gateway community for Melian obsidian trade since 60–70% of all chipped stone tools were made of Melian obsidian.¹⁴⁵⁴ The rest of the stone tools at Çukuriçi Höyük were made of locally available chert, which was of inferior quality compared to Melian obsidian.¹⁴⁵⁵ Throughout the Neolithic, Late Chalcolithic and Bronze Age periods, approximately two thirds of obsidian identified at Çukuriçi Höyük originated from Melos Demenegaki, and a third from the Melos Adamas source.¹⁴⁵⁶ Although central Anatolian obsidian from two different sources (Nenezi and Göllüdağ) – located 640km to the east – was found at Çukuriçi Höyük in each archaeological layer after 6500 BC, the presence of central Anatolian obsidian at this site was extremely rare from the Neolithic to the Bronze Age.¹⁴⁵⁷ This indicates that dwellers at Çukuriçi Höyük largely depended on the maritime exchange of Melian obsidian throughout their history and only occasionally received ready-made products in the form of fragmented blades and flakes from the central Anatolian obsidian sources.¹⁴⁵⁸

In order to differentiate between the sites of origin, gateway communities, and other ‘receiving’ centres of obsidian, scholars draw a distinction based on the quantity of obsidian present at a site. In contrast to EBA gateway communities such as Liman Tepe and Çukuriçi Höyük on the western Anatolian coast, which are identified as having an abundant assemblage of Melian obsidian, scholars identified other primarily receiving ‘centres’ of Melian obsidian in the western Anatolian hinterland. Two of those hinterland sites are Aphrodisias and Beycesultan, with a comparatively scarce assemblage of Melian obsidian, which was interpreted as an indicator of lesser involvement in the Aegean obsidian exchange network.¹⁴⁵⁹

¹⁴⁵⁰ Georgiadis 2008.

¹⁴⁵¹ Broodbank 2000, 286.

¹⁴⁵² E.g. Broodbank 2000.

¹⁴⁵³ E.g. Knitter et al. 2012; Knitter et al. 2013.

¹⁴⁵⁴ Knitter et al. 2012; Knitter et al. 2013.

¹⁴⁵⁵ Bergner et al. 2009.

¹⁴⁵⁶ Bergner et al. 2009.

¹⁴⁵⁷ Milić 2018; Milić 2019.

¹⁴⁵⁸ Milić 2018; Milić 2019.

¹⁴⁵⁹ Knitter et al. 2012; Knitter et al. 2013.

Unlike Çukuriçi Höyük, where between 60 and 70% of stone tools in all occupation phases were made of Melian obsidian,¹⁴⁶⁰ stone tools at Aphrodisias were predominantly made of local flint and chert, found in the Dandalas River valley close to the site.¹⁴⁶¹ The assemblage from Aphrodisias indicates that during the Late Chalcolithic and the EBA (4360–2909 BC), when Çukuriçi Höyük mostly relied on Melian obsidian sources, this site shows an entirely different situation. Aphrodisias, understood as a ‘receiving’ centre of Melian obsidian through network analyses,¹⁴⁶² in fact participated in several exchange networks, not limited to the Aegean basin. During all phases of Late Chalcolithic and EBA occupation, Aphrodisias received obsidian from Melos (400km west), Gyalı (180km southwest), and central Anatolia (520km east).¹⁴⁶³ Fifty per cent of the obsidian originated from both sources at Melos (Melos Demenegaki and Melos Adamas), slightly less than 50% from all four sources in central Anatolia (Çatköy, Boğazköy, Hotamış Dağ, and Nenezi Dağ) and only a few pieces were attested to have come from Gyalı.¹⁴⁶⁴ Obviously, the network model of Melian obsidian exchange excluded these non-Aegean sources, and instead argued for the centrality of western Anatolian coastal sites, abundant in obsidian from Melos,¹⁴⁶⁵ downplaying the equal relevance of all obsidian sources.

At other coastal western Anatolian sites in the Izmir region (Bakla Tepe, Liman Tepe) as well as further north in western Marmara (Troy), local flint stone tools predominate within the EBA 1 archaeological record. Unlike at Çukuriçi Höyük, where central Anatolian obsidian represented an extremely rare resource,¹⁴⁶⁶ at Bakla Tepe more central Anatolian than Melian obsidian was found in the Late Chalcolithic layers, which changed in EBA 1. During the earliest phase of EBA 1, Melian sources of obsidian are better represented at all western Anatolian coastal sites (Çukuriçi Höyük, Bakla Tepe, Liman Tepe and Troy),¹⁴⁶⁷ whereas during EBA 2, central Anatolian obsidian predominates at Bakla Tepe, Liman Tepe, and Troy,¹⁴⁶⁸ while the site of Çukuriçi Höyük was already abandoned.

This implies that dependence on a single source or network versus active involvement in different exchange networks is a more important issue than either geographical or political centrality. Among all these sites, both coastal and hinterland, Çukuriçi Höyük was the only place to be abandoned at the end of the EBA 1 period. Whereas dwellers at Çukuriçi Höyük exclusively maintained stronger reciprocal relations with other maritime sites to the west for the procurement of Melian obsidian, dwellers at Aphrodisias, Bakla Tepe, Liman Tepe, and Troy also established strong reciprocal connections through an extensive land-based network to the east (central Anatolia), and a rather tenuous one to the southwestern Anatolian coast (Gyalı) during the EBA 1 period. The other sites, except for Çukuriçi Höyük, already relied on two distinctive (albeit overlapping) obsidian networks during EBA 1 – maritime networks to the west and the land-based networks to the east. Therefore, it seems reasonable to conclude that reliance on multiple sources for obsidian was one among other distinctive features of the continuously occupied western Anatolian sites between EBA 1 and EBA 2, while others, such as Çukuriçi Höyük, did not have such multiple sources. Given that central Anatolian obsidian reached Çukuriçi Höyük only at the dawn of the Bronze Age and in limited quantities, and the fact that exchange networks always depend on the social distance between transactors, this calls for an alternative interpretation beyond the centrality of a site within an exchange network.

¹⁴⁶⁰ Bergner et al. 2009; Knitter et al. 2012.

¹⁴⁶¹ Leurquin 1986.

¹⁴⁶² Knitter et al. 2012.

¹⁴⁶³ Leurquin 1986.

¹⁴⁶⁴ Leurquin 1986.

¹⁴⁶⁵ Knitter et al. 2012.

¹⁴⁶⁶ Milić 2018; Milić 2019.

¹⁴⁶⁷ Knitter et al. 2012; Gatsov – Nedelcheva 2016; Kolankaya-Bostancı 2016.

¹⁴⁶⁸ Gatsov – Nedelcheva 2016; Kolankaya-Bostancı 2016.

From the perspective of the east Aegean and the coastal western Anatolian EBA 1 ‘cultural koine’,¹⁴⁶⁹ including the architectural plans and the distribution of Melian obsidian, Çukuriçi Höyük appears to be well embedded into the ‘Aegean World’. However, this Aegean connectivity is not limited to the ‘cultural koine’ and the coastal sites alone. Within the same ‘cultural koine’, trading relations and consequently social relations appear dissimilar. Whereas the EBA 1 sites such as Liman Tepe, Bakla Tepe, and Troy established and maintained trading links to the east through which they acquired central Anatolian obsidian, the record from Çukuriçi Höyük reveals a stronger dependence on Melian obsidian alone. The sites that do not fall into the category of the east Aegean and coastal western Anatolian EBA 1 ‘cultural koine’,¹⁴⁷⁰ such as Aphrodisias, were embedded into multiple exchange relations with communities to the west, through which they acquired Melian obsidian at least from the Late Chalcolithic (4360 BC), in addition to central Anatolian obsidian from the east.

As I showed above, obsidian distribution not only varied among sites within the EBA 1 eastern Aegean and western Anatolian ‘cultural koine’ but also among western Anatolian gateway communities for Melian obsidian trade. Whereas most of the archaeologists would interpret the reliance on Melian obsidian at Çukuriçi Höyük as an advantage, indicating a strong and reliable trading network or self-procurement of obsidian from Melos, which made Çukuriçi Höyük an important gateway community for Melian obsidian exchange,¹⁴⁷¹ this is only one way of interpreting it. Conversely, if we use the Melian obsidian as a proxy for social relations and wider social networks, the same context can be seen as a disadvantage, since dwellers at EBA 1 Çukuriçi Höyük put ‘all their eggs in one basket’ by relying solely on one social network, with little or no alternative. By contrast, other western Anatolian sites relied on multiple social and exchange networks for obsidian already during EBA 1 and the Late Chalcolithic, which could be seen as an advantage since dwellers at these sites secured multiple alternatives. This does not imply that a weakening of links or social networks between Çukuriçi Höyük and Melos would be the reason for the abandonment of the site, as the inhabitants had access to local flint and stored raw Melian obsidian material. However, if they encountered another socio-political difficulty on-site or within the region, the reliance on a single obsidian exchange network at Çukuriçi compared to other regional sites relying on multiple networks, would make Çukuriçi Höyük weaker, lacking diversity of social networks and available alternatives. Consequently we should recognize both the advantages and the disadvantages of reliance on single vs. multiple exchange or social networks.

The regional obsidian network assemblage also demonstrates that regional obsidian exchange networks were situational, based on social rather than only the geographical proximity of resources and trading sites. As different trading networks also overlapped, the assemblage supports the argument that Çukuriçi Höyük was indeed a *gateway community* of Melian obsidian trade (among other western Anatolian coastal sites) located at the eye of a needle passage,¹⁴⁷² yet different from other regional Melian obsidian gateway communities to the north, such as Liman Tepe and Bakla Tepe, which relied on multiple social and exchange networks and had more available alternatives than Çukuriçi Höyük.

An analogous situation has been observed among the Baruya. Baruya salt was known beyond their own tribal frontiers. It was well-known in Anga-speaking territories, which stretched approximately 170km southwest–northeast (between Ihu and Mumeng) and 150km northwest–southeast (between Fore and Kerema) (see Fig. 36). Baruya salt was also greatly valued among the local tribal groups of Mumeng, outside Anga territory, which no Baruya had ever visited personally. Mumeng groups acquired Baruya salt through exchange

¹⁴⁶⁹ Kouka 2002; Kouka 2016a.

¹⁴⁷⁰ Kouka 2002 Kouka 2016a.

¹⁴⁷¹ Knitter et al. 2012.

¹⁴⁷² Gingrich 2017b.

with the ‘middleman’ Bakia tribal group, who acquired it from the Baruya.¹⁴⁷³ Although the Mumeng could acquire salt through the riverine route at Huon Gulf, they preferred Baruya salt, traded to the steep East Papuan mountains and valleys in the highlands through a land-based exchange network. The case of the Aegean basin appears to be similar. Dwellers at Çukuriçi Höyük traded for obsidian with the island sites to the west, between Melos and western Anatolia, whereas the obsidian from Gyalı – which is geographically closer to Çukuriçi Höyük than Melian obsidian – and central Anatolian obsidian did not play an important role during EBA 1.

On the one hand, this assemblage demonstrates the existence of regional obsidian exchange networks that were situational, based on the social rather than the geographical proximity of resources and trading sites. As different trading networks also overlapped, the assemblage supports the argument that Çukuriçi Höyük was indeed a *gateway community* of the Melian obsidian trade (among other western Anatolian coastal sites) located at the eye of a needle, unavoidable passage¹⁴⁷⁴ for obsidian trade into Anatolian hinterland. However, the evidence does not support the interpretation that Çukuriçi Höyük was a *gateway community* in the central Anatolian obsidian exchange network. The latter becomes more obvious once the assemblage from Çukuriçi Höyük is compared to the hinterland site of Aphrodisias as well as other western Anatolian coastal sites which participated in networks to both the east and the west, although most of the stone tools at Aphrodisias and other sites were made of local flint. Therefore, we should think of obsidian at Çukuriçi Höyük – although this does not apply to Aphrodisias,¹⁴⁷⁵ Liman Tepe, Bakla Tepe,¹⁴⁷⁶ and Troy¹⁴⁷⁷ where the majority of stone tools were made of local flint and chert – as a precious material, similar to stone axes among the Baruya, which they lacked locally, but which were necessary for subsistence and to defend their territory. Like the exchange of salt for stone axes among the Baruya, at Çukuriçi Höyük Melian obsidian could have been exchanged for locally produced metal tools. Dwellers at the hinterland site of Aphrodisias and other western coastal sites, on the other hand, benefitted from the local flint resources, on which they mostly relied for stone tools: therefore, flint and chert (rather than obsidian) were possibly more of a precious, desirable, and even sacred material at these sites. Nevertheless, during EBA 1, dwellers at Aphrodisias, Bakla Tepe, Liman Tepe, and Troy participated in wide-ranging exchange networks of obsidian to the east and the west, and must have understood that black obsidian was not only useful for the production of stone tools but could also be used as primitive money, which, on a regional scale, the local brown, grey or white local flint could not.

An increase in central Anatolian obsidian supplies to the EBA 2 western Anatolian sites in comparison to a somewhat stronger reliance on Melian obsidian during EBA 1 can be taken as a proxy for other changes within the region. Writing from the ‘Trojan’ point of view, Ünlüsoy argues that ‘the Trojan community experienced a sudden and major breakthrough after contacts were intensified with the communities to the east. The changes affected all spheres of daily living at Troy. The social and economic as well as political organization were transformed drastically.’¹⁴⁷⁸ Whereas these trading networks benefitted a few people at Troy, Liman Tepe, and Bakla Tepe, the intensification of the land-based networks from western Anatolia to Cilicia coincided with the obvious material changes in EBA 2, but also detachment of people from their land, such as observed at Çukuriçi Höyük.

¹⁴⁷³ Godelier 1986a.

¹⁴⁷⁴ Gingrich 2017b.

¹⁴⁷⁵ Leurquin 1986.

¹⁴⁷⁶ Kolankaya-Bostancı 2016.

¹⁴⁷⁷ Gatsov – Nedelcheva 2016.

¹⁴⁷⁸ Ünlüsoy 2016, 402.

VII.4. Supra-Regional Exchange and Near Eastern Weights¹⁴⁷⁹

In this section, I look at a ‘specific’ type of evidence pointing to a link to commodity exchange, including, with a very high probability, the exchange of metals or other specialized goods from Çukuriçi Höyük. This evidence comprises five stone balance weights that have been excavated from the EBA 1 Çukuriçi Höyük site in close proximity to metallurgical workshops within a domestic context. In this case the introduction of stone weights is discussed in ethnographic terms through a case study of the Akkan, to whom the metrology of the *mitkal* was introduced by Arab traders. As I argue in this section, Arab traders and the Akan can be structurally compared with the Near Eastern merchants and communities in western Anatolia. In these cases, their motivation for trade was not through gift or barter, commonly leading to lasting social relations between transacting groups. Instead, through the use of weights and metrology, these two groups conducted pure commodity exchanges that could occur whilst maintaining some social distance between the partners involved in such a transaction. This would allow the two partners to terminate trading contacts at any point in time. While the evidence for metrology and external measures of value such as weights is still limited in western Anatolia, it remains possible that, as commodity items transacted between the Near Eastern merchants and western Anatolian communities, metals were circulated as items of gift and item exchanges in the Aegean, although an emulation of elites in the eastern Aegean islands through the long-distance exchange of these objects cannot be excluded. Also, based on the evidence of obsidian and metal exchanges in the wider region of western Anatolia during EBA 1, this section concludes that multiple modes of exchange and socio-political organization coexisted in time and space. Internal heterogeneity rather than socio-political homogeneity characterized this ‘cultural koine’ at the dawn of the Early Bronze Age.

To discuss supra-regional economies, I return to metals, as the set of metal or associated small finds point towards some kind of supra-regional connections. The gateway community model, previously inferred for Melian obsidian, has been further extended by the inclusion of metal exchange, transmission of metalworking knowledge, and manufacturing techniques at Çukuriçi Höyük.¹⁴⁸⁰ In this case, modes of transaction can be further addressed through indirect evidence for the exchange of metals through stone balance weights identified at the site. These point towards an influence from the Near East and the adoption of weighing at the coastal sites of western Anatolia during EBA 1, when ‘the *Age of Accountancy and Metrology* had started’.¹⁴⁸¹

Finds at Çukuriçi Höyük included five stone balance weights dating to ÇuHö IV and III (2900–2850/2800 BC) (see Fig. 38). The first was found in a metallurgical workshop, the second in a storage room linked to a metallurgical workshop, and the third in mixed layers close to an oven that was likely used for metalworking. Two of the weights could not be assigned to a precise context¹⁴⁸² (see Fig. 39). The close connection of these balance weights to metalworking contexts at the site, along with their light weight (approx. 4–40g), leaves no doubt that these objects facilitated metal exchange, most likely for silver and gold.¹⁴⁸³ This holds true despite previously raised doubts about the spool-shaped weights being used as grinders, since they do not bear any marks.¹⁴⁸⁴ Considering the ethnographic record, geometric

¹⁴⁷⁹ An earlier version of this section has been published in Cveček 2020.

¹⁴⁸⁰ Mehofer 2016.

¹⁴⁸¹ Rahmstorf 2016, 258.

¹⁴⁸² Horejs 2016b.

¹⁴⁸³ Rahmstorf 2015; Rahmstorf 2016; Horejs 2016b; Massa 2016; Massa et al. 2017.

¹⁴⁸⁴ Haas-Lebegyev – Renfrew 2013.



Fig. 38 1. 09/986/3/1, phase ÇuHö IV, 3.78g; 2. 08/520/3/7, phase ÇuHö III, basalt, 15.67g; 3. 11/1200/3/22, phase ÇuHö I, marble, 31.2g; 4. 12/5001/3/59, phase ÇuHö I; slate, 5.2g; 5. 13/5110/3/2, phase ÇuHö IV, slightly serpentinized peridotite, 39.79g (Horejs 2016b, fig. 4)

stone weights without incision marks are not an exception limited to prehistory, as they were reported as being in use in West Africa in the last century.¹⁴⁸⁵ Regarding the use of light balance weights, these may not necessarily be restricted to metal exchange. Transactions involving rare specialized goods, where small variations in size and weight matter and where no

¹⁴⁸⁵ Garrard 1972; Garrard 1980.

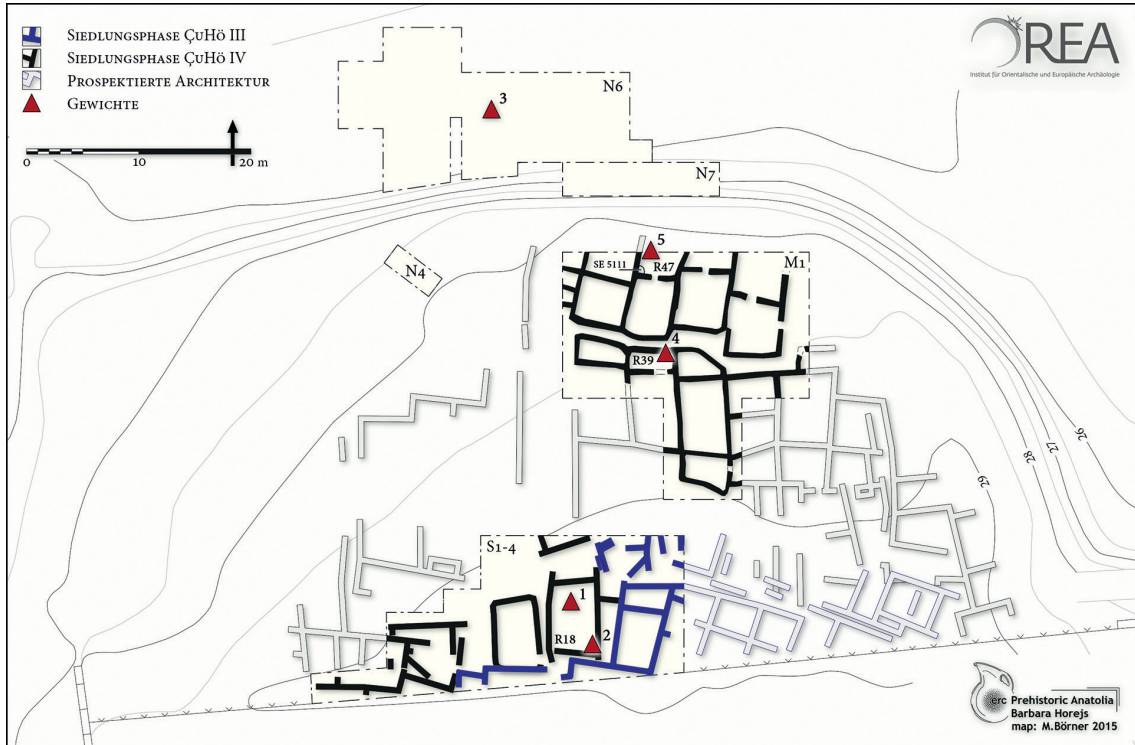


Fig. 39 Distribution of weights in the Early Bronze Age settlement phases ÇuHö IV und III (Horejs 2016b, fig. 7)

pre-defined forms of transportation exist, including pigments, spices, or *materia medica*, may be subjected to weighing.

Two of the four balance weights identified in a metalworking context at the contemporaneous island site of Poliochni (Lemnos) can be compared to those of Çukuriçi Höyük.¹⁴⁸⁶ A set of oblong dark stone weights (hematite) at Poliochni Blue and another at Çukuriçi Höyük show a strong similarity in their shape, material, and weight to the Near Eastern types of weights found at the EBA site of Ebla,¹⁴⁸⁷ known as one of the earliest kingdoms in Syria. Sets of spool-shaped balance weights found at both sites point to a possible local adaptation of weighing practices particular to the eastern Aegean islands and coastal western Anatolia, as there is no comparative Near Eastern form. Rahmstorf¹⁴⁸⁸ interprets these as indicators of a shared Aegean weighing practice, and maintains that this metric system was introduced to the Aegean from Syro-Mesopotamia at the beginning of the 3rd millennium BC.

Rahmstorf's comprehensive analysis of prehistoric stone weights expanded our understanding of EBA 1 exchange practices in western Anatolia and proved that long-distance exchange between the east and west facilitated the transfer of goods and knowledge of unique measuring techniques.¹⁴⁸⁹ Nevertheless, the scarcity of balance weights available for EBA 1 western Anatolia calls not only for comparison with contemporaneous sites in Mesopotamia and Egypt (where data is equally lacking for this period), but also beyond archaeological contexts. How did weighing and long-distance trade between Mesopotamia and western Anatolia influence the social lives of exchanged objects and the daily lives of dwellers at Çukuriçi Höyük in particular?

¹⁴⁸⁶ Rahmstorf 2016; Rahmstorf 2018b.

¹⁴⁸⁷ Rahmstorf 2016.

¹⁴⁸⁸ Rahmstorf 2016.

¹⁴⁸⁹ Rahmstorf 2016, 258.

Ethnographic Example of Weighing Practices and Long-Distance Exchange

To address the question above, I turn to an ethnographic example from Akan.¹⁴⁹⁰ This ethnographic case of gold trade and weighing practices from Ghana is relevant for two reasons. Firstly, it addresses the introduction of new weighing techniques to a non-state society, within which gold and silver were not perceived as (luxury) commodities prior to the intensification of long-distance trade. Secondly, the case highlights a time lag between the primary changes in the economic system and the secondary changes in material culture that they led to.

Naturally, colonial encounters have fundamentally transformed West African metallurgical societies. Yet these societies were not operating in a vacuum before the arrival of Europeans, and hence remain relevant for discussing prehistoric weighing practices. The same is applicable for societies in EBA 1 western Anatolia, where recent research¹⁴⁹¹ points towards external influences and calls into question the independent development of a metric system. Considering the limited similarities between the modern example from Akan and the empirical example from prehistoric western Anatolia, the approach applied here understands weights not only as spatially bounded material objects, but as a proxy for a type of practice that is culturally transmitted.¹⁴⁹² The archaeological analysis of EBA 1 Near Eastern weights in western Anatolia indeed raises questions about how and why weights were adopted. In order to obtain a complete picture, the archaeological investigations must be complemented with both theories of exchange developed within economic anthropology, and ethnographic observations.

Several Akan chiefdoms in what is now Ghana were involved in the metal trade before European colonization. Prior to establishing contacts with Arab traders, the Akan did not use gold as a medium for exchange, but rather produced it for personal use and adornment.¹⁴⁹³ Although the Akan used iron pieces for barter outside their cultural sphere, similar to the salt bars of the Baruya,¹⁴⁹⁴ iron pieces were also exchanged as gifts within the Akan villages. In a rich ethnographic study, supported by a multilingual historical analysis of Akan weights, Garrard¹⁴⁹⁵ argued that weights were introduced into Akan society from the north, through the trans-Saharan gold trade, in the 17th century CE. The Arab traders who traded gold between Ghana and Morocco introduced two types of ‘Islamic weights’: *mitkal* for weighing gold (4.3–4.7g) and *wakia* for weighing silver (26–30g). Following early colonial encounters, the Europeans introduced two additional sets of weights to Akan: the Portuguese in c. 1500 CE, and the Dutch in c. 1650 CE.¹⁴⁹⁶

A large variety of weights made of different materials such as brass, silver, gold, seeds, pottery, and stone are reported to have been in use in varying proportions across different Akan regions and periods. The shapes of these form two broad groups – geometric (made of stone, without incision marks) and figurative (made of gold, brass, or clay). The introduction of weights to the Fantera village of Debibi in western Ghana, approximately 400km to the north of the Cape Coast, was recalled by one of the village elders:

‘The Mande were using stone and metal weights for trading among themselves. They came to trade here. My late grandfather Sanango told me this. We made some of our weights to the same weight as the Mande. And we made some to the same as Europeans. The Elminas and Fantis were coming here to buy gold from the Fanteras and

¹⁴⁹⁰ The present text discusses only one example in detail, rather than a discussion on a more abstract level based on several examples that are available in the ethnographic literature.

¹⁴⁹¹ E.g. Horejs 2016b; Rahmstorf 2016; Massa et al. 2017; Massa – Palmisano 2018; Rahmstorf 2018b.

¹⁴⁹² Bourdieu 1976.

¹⁴⁹³ Garrard 1980.

¹⁴⁹⁴ Godelier 1972.

¹⁴⁹⁵ Garrard 1980.

¹⁴⁹⁶ Garrard 1972.

they brought European weights to the market in Beho [Begho] where they sold them. During the great market of Beho we bought these. We know that they are European weights.¹⁴⁹⁷

The interlocutor then shows his set of Dutch troy weights to the researcher, demonstrating Akan keenness for adopting foreign weights. The reason for this becomes evident from an explanation of the weights' importance provided by an old woman from Njau village:

'In the old days we had stones as weights, also metal weights and seeds. There used to be quite a lot of stone weights but they are now lost since Njau was burned. Some were square, and others like pebbles. The metal and stone weights were of equivalent weight. If you didn't have weights you couldn't trade in gold; you can't know the price of anything unless you have weights. The Kramo (Muslims) also had both stone and metal weights. They weighed the same as ours. Kramo metal weights looked the same as ours but were not so 'stylish'. I can't tell if we or the Kramo had weights first, but our weights were the same.'¹⁴⁹⁸

This quote implies that in Akan society weights were privately owned and served as a standard unit for the exchange value of products. It was not unusual for a person to own many weights (up to 100 weights), as these were accumulated over several generations. Two distinct types of weighing have been described. Double weighing was practised between strangers at markets, where both the seller and the buyer would weigh gold with their own scales. In this case, sellers would tend to use slightly heavier weights than buyers, so that sellers would tend to sell, and thus charge, more. The variability of weights, and therefore a disagreement over the value of goods in transmission, would either lead to a consensus through bargaining or a visit from a local smith or chief – the two referents for the accuracy of the weights. This case shows that negative reciprocity, in which the two distant parties involved in an exchange aim to 'maximize utility at the other's expense',¹⁴⁹⁹ was practised despite the use of weights as a standard of value and a means of translation for exchange ratios or price. Another weighing practice was described for the Akan, when the two parties involved in the exchange were linked by previous obligations. In this case, 'the gold would be weighed only once, on the scales of the recipient':¹⁵⁰⁰ a chief's scales would be used for weighing gold for the payment of fines, and a lender's scales for the repayment of debt.

The impact of long-distance trade among the Akan resulted in several technological and socio-political changes that can be traced archaeologically. In addition to the introduction of weighing practices, which accompanied and may even have triggered the commodification of gold, the Akan derived new architectural forms from Middle Niger and adopted several new pottery styles as well as the use of ivory side-blown trumpets. The intensification in the gold trade had an extensive impact on Akan social and economic organization, which led to greater craft specialization, intensive gold mining, and a greater demand for slave labour.¹⁵⁰¹ While changes in material culture (including domestic architecture) were gradual, long-distance exchange and weighing practices had an immediate effect on established economic practices and labour organization.

¹⁴⁹⁷ Garrard 1980, 5.

¹⁴⁹⁸ Garrard 1980, 30.

¹⁴⁹⁹ Sahlins 1972, 195.

¹⁵⁰⁰ Garrard 1980, 174.

¹⁵⁰¹ Garrard 1980.

Exchanges of Commodities are conducted through Commodity Relations

How can we use the Akan gold trade to better understand transactions involving weights at Çukuriçi Höyük? Considering that commodity exchange begins at the boundaries of ‘primitive communities’,¹⁵⁰² this implies that the owners of such objects were willing to alienate them voluntarily, since the demand for these things came from outside rather than from inside their community. Although commodity exchange might at first be accidental, its repetition leads to the emergence of and distinction between use and exchange values¹⁵⁰³ (see Tab. 20). However, the emergence of such a distinction does not necessarily imply that the exchange value becomes the dominant factor from the outset. In most cases, ‘negotiations’ will decide their relative weight to each other, i.e. of the exchange value versus the use value. Negotiations of this kind are the key element of barter as defined by economic anthropology. From this perspective, standardized weights signify a somewhat different situation of exchange when, for various reasons, the quantity has taken over in determining the exchange ratios. Given the fact that some local communities within EBA 1 western Anatolia used weights for specific goods, this certainly does not support any prevalence of gift exchange. Hence, we cannot classify these as solely gift-giving systems. The objects were measured against each other based on external criteria: a common practice when the exchange is conducted regularly, and each time in larger quantities, between strangers. Equally, the possibility of weights as an indicator of simple barter trade between distinct western Anatolian and Mesopotamian groups does not seem to be the case. In barter exchange, as described in the last paragraph, the objects or services are exchanged for one another through an internal negotiating balance, without money or any external criteria for mediating value.¹⁵⁰⁴ Since balance weights in the western Anatolian context certainly served as a medium of exchange, this calls for an alternative explanation.

Western Anatolian weights indicate contact between Mesopotamian polities and western Anatolia via maritime routes. Whether it was in search of silver – the proto-currency of Mesopotamia by the mid-3rd millennium¹⁵⁰⁵ – or for some other reason, Mesopotamian merchants reached out to the periphery, and the archaeological record illustrates considerable differences between the two cultural systems. Without secure evidence for a counter-transaction, money does not seem to be of importance in these transactions, yet the value of specified goods was nevertheless compared using weights to determine a quantitative exchange ratio. The use of weights for the exchange of metal, without a monetary transaction, was documented in reports from the 15th century CE, when Egyptian merchants supplied caravans of copper to Sudan in return for gold.¹⁵⁰⁶ In this vein, weights found at western Anatolian sites can be regarded as ‘boundary objects’, in which they

‘Are both plastic enough to adapt to local needs and the constraints of the several parties employing them, yet robust enough to maintain a common identity across sites. They are weakly structured in common use, and become strongly structured in individual-site use. These objects may be abstract or concrete. They have different meanings in different social worlds but their structure is common enough to more than one world to make them recognizable, a means of translation. The creation and management of boundary objects is a key process in developing and maintaining coherence across intersecting social worlds.’¹⁵⁰⁷

¹⁵⁰² Marx 1970; Gregory 1982; Gingrich 1984.

¹⁵⁰³ Marx 1970, 50.

¹⁵⁰⁴ Humphrey – Hugh-Jones 1992, 8; Gingrich – Schweitzer 2014, 28.

¹⁵⁰⁵ Broodbank 2013, 337.

¹⁵⁰⁶ Garrard 1980.

¹⁵⁰⁷ Star – Griesemer 1989, 393.

Considered as boundary objects, weights were introduced to western Anatolia in the earliest phases of EBA 1, either by strangers (Mesopotamian merchants) or possibly by kinsmen or trading partners, along with the coastal trading and overlapping kin network between western Anatolia and Cilicia. Therefore, the existence of weights at western Anatolian sites provides an exceptional context ‘for the commoditization of things that are otherwise protected from commoditization’.¹⁵⁰⁸ In EBA 1 western Anatolia, archaeological records do not point to gold or silver as being common luxury commodities, and so we cannot *a priori* assume that every society perceives all metals as status symbols.¹⁵⁰⁹ Gold in EBA 1 western Anatolia was meant for personal use – as adornment in extremely small quantities – which recalls the Akan case study prior to encounters with Arab traders triggering the commodification of gold among the Akan. The role of Arab traders is thus comparable to that of the Mesopotamian merchants or interactions with other trading partners. In the western Anatolian EBA 1, the existence of these specialized tools for identifying exchange rates for commodities is therefore a strong indicator for the accompanying social existence of interregional trade specialists. These middlemen already practised weighing during EBA 1 in western Anatolia, demanding its acceptance from their trading partners who had not yet adopted weights, thus creating dependency and asymmetric relations between trading partners.

Mesopotamian encounters in their western Anatolian periphery are understood as having introduced weights and created a demand for gold and silver, thus facilitating western Anatolian non-commodified goods (gold, silver, and other specified goods) to enter a new social life: a commodity phase in circulation to Mesopotamia. Like the Akan, the dwellers at Çukuriçi Höyük adopted standardized weighing practices¹⁵¹⁰ to facilitate exchanges with merchants or groups from outside their regional and/or tribal territory, to more easily acquire goods from outside. In exchange for adopting weights, showcasing their compliance with pre-existing terms and conditions of trade introduced from outside, the trading partners necessarily had to offer something in exchange that was highly desired among the dwellers at Çukuriçi Höyük. Some possible items could be wool or woollen objects, not locally produced at Çukuriçi Höyük, or even central Anatolian obsidian, which reached Çukuriçi Höyük only during EBA 1 – and not earlier, as was the case for Bakla Tepe, Liman Tepe, and Troy. With reference to the Akan and the Baruya, commodities such as gold, silver, and copper, as well as wool and obsidian, could then, on the one hand be transmitted as *commodities* between strangers (Mesopotamian merchants and dwellers at Çukuriçi Höyük) and kinfolk trading partners (a trading partner outside Çukuriçi Höyük’s territory, possibly a close or distant relative or a relative of a relative). On the other hand, the same goods could have remained in circulation as *gifts* between kin or allies within the Aegean basin or as *precious items* with an exchange value traded with neighbouring territories.¹⁵¹¹ At the same time, the local development of the Aegean spool weights found in the EBA 1 layers at Çukuriçi Höyük and Poliochni (which remained in use across the region during EBA 2) further indicates that the commodification of these specified items was not limited to the Near East, but was also introduced to the Aegean basin. There, however, the values, demands, and ratios were adapted to the local standards of the Aegean basin.

¹⁵⁰⁸ Appadurai 1986, 15.

¹⁵⁰⁹ For a different opinion, see e.g. Şahoğlu 2005, 341.

¹⁵¹⁰ Horejs 2016b.

¹⁵¹¹ For discussion of product exchange and discontinuous stages of commodification processes in the 3rd and 2nd millennium BC eastern Mediterranean, often not involving market exchange, see Jung 2021.

Chapter Summary and Conclusion

Despite the evidence of long-distance commodity exchange during the earliest phases of EBA 1, differentiated settlement plans – clearly indicating rigid hierarchical differences within and between residential units in western Anatolia – only appear around 2600 BC. At Çukuriçi Höyük, there is no evidence of a central building associated with a permanent central authority during EBA 1. Moreover, metal production was not limited to a specific workshop, but regularly distributed around the settlement, as are the weights found.¹⁵¹² This leads to two possible conclusions:

First, the EBA 1 maritime-based long-distance exchange between Mesopotamia and the coastal sites of western Anatolia might have been a rare, rather than a well-established, practice. This could be a case of mere coincidence at the boundaries of community, in which boundary objects such as weights played a key role in translating exchange value without the importance of money. These boundary objects facilitated the transformation between the non-commodity phase (in western Anatolia) and the commodity phase (in Mesopotamia, outside western Anatolia) for the social lives of specific goods exchanged between strangers. So far, only rare evidence of weights has been identified in western Anatolia for this period. A comparison with the abundance of weights among the Akan, which facilitated long-distance trade, further supports this conclusion.

Second, the maritime-based long-distance exchange between Mesopotamia and the coastal sites of western Anatolia might have been a well-established practice that was purely ‘economic in character’, in which the balance of weights could translate the value of goods. As seen from the example of the Akan gold trade, such a system of commodity exchange may not have been capable of preventing fraud between strangers. This does not imply that goods produced at Çukuriçi Höyük were intentionally produced for exchange, but, as seen from the Akan, commodity exchange is still possible, even in the absence of such intent. The seemingly voluntary commodity transaction between the dwellers at Çukuriçi Höyük and the Mesopotamian merchants also implies that both parties involved were free to trade or cease to trade at any time. The exchange of commodities, unlike that of gifts, is completed after the transaction occurs, and does not lead to durable social relations based on some kind of continuing reciprocity. Therefore, such commodity exchange networks should be perceived as less durable than gift transactions within the given prehistoric setting.

In either case, the EBA 1 site of Çukuriçi Höyük is an example of an economic system in which gift exchange and barter within a village and a region, as well as the occasional commodity exchange of specified goods with distant Mesopotamian polities, coexisted. The adoption of weights during EBA 1 shaped asymmetric relations, in which an external trading partner defined a condition and standard values for trade to which dwellers at Çukuriçi Höyük necessarily agreed, reproducing the same weighing standards and developing an alternative one for trade within the Aegean basin. Unlike the violent colonial encounters between different social spheres, based on the archaeology, the introduction of weighing and metrology does not appear to have been a violent act, since there is no evidence for group-organized violence during the EBA 1 period in western Anatolia, whereas it peaked during EBA 2. However, the non-violent introduction of weights and trading standards does not imply symmetrical relations between trading partners.

It is likely that the differences between the two distant social spheres – Mesopotamia and western Anatolia – were maintained during EBA 1. Metals could be circulated as commodities between western Anatolia and Mesopotamia, whereas within the Aegean basin, the same objects could be transferred as gifts, commodities, or precious objects, depending on the social distance between transactors. Yet, Çukuriçi Höyük is by no means representative of all EBA 1

¹⁵¹² Horejs 2016b.

sites in western Anatolia. Unlike Poliochni, Troy, Demircihöyük, and other EBA 2 trade centres based on chiefdom social organization, the site of Çukuriçi Höyük was abandoned at the end of EBA 1.

As I suggested in this chapter, it seems that the main difference between Çukuriçi Höyük and other regional sites was not the site's geographical or political centrality in the Melian obsidian network, but the stronger reliance on imported obsidian at Çukuriçi Höyük in comparison to the mostly locally produced stone tools found at other sites. This difference between western Anatolian EBA 1 sites coincided with the reliance on a single obsidian exchange network (from Melos) at Çukuriçi Höyük, whereas other sites relied on multiple trading connections (Melian, central Anatolian, and Gyali obsidian). Reliance on a single obsidian exchange network (at Çukuriçi Höyük) versus reliance on multiple exchange networks (at Liman Tepe, Bakla Tepe, Aphrodisias, Troy) for the procurement of objects necessary for a society's reproduction seems to be one of the key reasons for the site's subsequent abandonment. In this case, it was not so much a monopoly but the lack of diversity in obsidian trading networks at Çukuriçi Höyük which made dwellers at this site more dependent and vulnerable in that regard. Although dwellers at Çukuriçi Höyük ostensibly established a provisional trading network to the east at the dawn of the Bronze Age, which can be observed from the adoption of Near Eastern weights, these networks did not benefit the site to such an extent that it proved advantageous to the dwellers at Çukuriçi Höyük. Moreover, as seen from the Akan case, it is possible that dwellers at Çukuriçi Höyük adopted the Near Eastern weights as easily as the Akan did, since it is likely that the dwellers at Çukuriçi Höyük utilized other measures of weight – such as seeds, round pottery discs, stones, and moulds – possibly even before the Bronze Age. Weights being attested at Çukuriçi Höyük, may provide evidence that weights were not only translators of value, but possibly also a unit of accounting. In this case, dwellers at Çukuriçi Höyük may have agreed to produce a certain amount of metal before the merchant returned. If suppliers (dwellers at Çukuriçi Höyük) could not meet the demand (Mesopotamian merchants), then the broken agreement could result in irreversible changes, such as the selling of labour and abandonment of the site.

In the introduction to this chapter, I emphasized the importance of prestige goods and the tripartite composition of economies – selling/bartering, giving, and keeping – crucial for the reproduction of any society. With reference to the EBA 1 assemblage, it seems that in western Anatolia the EBA 1 period was not only a time of emerging accountancy and metrology. In addition, it was also the period during which the obsidian from either Melos or central Anatolia went through a key transformation – from being a sacred item to becoming a prestige good. This transformation, however, has not been observed at Çukuriçi Höyük, where metal, like obsidian, was scattered across the site. Neither metal nor obsidian was found in greater amounts or together with other possible prestige goods within one particular household on the site, which was the case at Poliochni, Thermi, Bakla Tepe, and Liman Tepe. It appears that during this period, the emerging elites in the eastern Aegean islands and some parts of coastal western Anatolia may have created chiefly alliances through emulation with polities to the east and west. The dwellers at Çukuriçi Höyük were seemingly cut off from this and instead emphasized the sharing of food as well as other goods between households, on-site. This homogeneous sharing practice at Çukuriçi Höyük, however, downplayed intra-household inequalities, possibly in terms of food as well as decision-making powers, which has been well attested ethnographically.

VIII. Conclusion

‘One of the fun things about matryoshkas is the careful way in which they are crafted, such that all the layers fit nicely together. This is the case for the standard evolutionary narrative, which presents a parsimonious explanation of human social origins based on a set of interlocking hypotheses. But, in the end, the narrative is still a story and parsimony does not make it true ... there’s more than one way to craft a matryoshka.’

M. Kay Martin¹⁵¹³

Introduction

This chapter draws upon the main conclusions of my basic argument that households in non-state sedentary societies¹⁵¹⁴ are always embedded in both local domestic as well as regional and inter- or supra-regional mixed economies. Wilk and Rathje’s hypothesis¹⁵¹⁵ that band and urban societies might emphasize exchange between households and groups whereas agricultural societies and those with mixed economies primarily pool within the households can be only partially supported. Both, pooling within households and exchange between households, have been proven to be an important socio-economic practice at both Platia Magoula Zarkou and Çukuriçi Höyük during the Late Neolithic and Early Bronze Age.

As I showed in this contribution, items of regional exchange may vary between groups. At times, these could be gendered objects, such as female-produced pottery that could be valued elsewhere, or become an important item of regional barter, gift, and marital exchange. In other cases, ecological circumscription, which could apply to obsidian – restricted to the Aegean islands of Melos, Giali, and central Anatolia in our case – fostered exchange between groups. In this case, it is not gendered objects but desired, precious objects that trigger exchange between households and groups. These desired objects could also comprise feathers, wild animal fur or teeth, stags, antlers, and other game objects that could be valued for male or female initiations, local festivals, or even for their durable material properties.

I have shown through the case of Çukuriçi Höyük and other sites in the region, that the earliest metalworkers were not necessarily itinerant smiths. Instead, sedentary metalworking was a conspicuous part integrated into heterogeneous regional economic and socio-political systems. These included acephalous, great man societies, as evident from Çukuriçi Höyük, as well as chiefdoms with unilineal and possibly conical clan structures, such as at Poliochni, Thermi, and Liman Tepe. These different types of social organizations then coexisted in time and space within the Aegean basin. Although I could not detect any ‘extreme households’ – those of the landed vs. those of the landless – the chiefly households that could be inferred from other regional contemporary sites, do not find any counterpart at Çukuriçi Höyük. This result suggests that not all metalworking societies were integrated into politically centralized socio-political systems at the dawn of the Early Bronze Age in western Anatolia.

The obvious question, however, remains whether Çukuriçi Höyük was then embedded in some supra-polity, chiefdom social organization, in which case we are not looking at a chiefly

¹⁵¹³ Martin 2018, 229.

¹⁵¹⁴ This is similar to, but different from local groups among most foraging as well as most agricultural state societies.

¹⁵¹⁵ Wilk – Rathje 1982.

village site such as the Omarakana in the Trobriand Islands, but some other satellite village embedded in the wider regional system, not led by a chief but by a local headman. If this was the case, then we should ask ourselves which are the markers for chiefdom social organization in villages other than Omarakana, meaning villages that do not host a chief, for which the Omarakana village is not representative. Considering that a redistributive economy is not necessary for the emergence and existence of chiefdoms, can Çukuriçi Höyük be considered as a producing site of metals primarily for a chiefly centre or for long-distance exchange? If metals were the exotica in a wider region, not widely attested as a craft on a regional scale, then was it necessary that the absent elite was in charge of these items' distribution?

To address this question, I followed the classification of context, concentration, scale, and the intensity of metal production at Çukuriçi Höyük at the dawn of the EBA. Regarding context, metal production at Çukuriçi Höyük was associated with domestic architecture, within the same hearths as cooking. Production within a specialist's workshop associated with elite markers, such as seals and stamps, cannot be supported for Çukuriçi Höyük.

Regarding the concentration of metal production at Çukuriçi Höyük, the record neither fits *nucleated production*, meaning production for regional consumption, in which artisans are limited to a particular site within a region, nor *dispersed production*, meaning production for local consumption, as the same type of craft can be identified in each community if we follow the model for craft specialization developed by Costin.¹⁵¹⁶ On the contrary, at Çukuriçi Höyük the metalworking that took place within household contexts was produced for both local consumption and regional exchange. Whereas local consumption of metals can be seen from a large amount and widely attested access to arsenical copper at the site, production for regional exchange can be seen from the production of rods for exchange, as well as indirect evidence of weights as an external measure for the commodity exchange of metals. The same principle of production for local and regional consumption has been well documented among the Baruya, who produced salt for both local and regional consumption. Therefore, to develop a model of household-based craft specialization and associate it with a 'chiefdom's satellite' would be erroneous in this case. We cannot expect that non-state local communities solely produced crafts for exclusively local consumption. Both local needs and regional wants created niches for exchange, which linked members of different communities into a meshwork of social relations, not necessarily motivated by the expansion of chiefdoms but instead, primarily by their bottom-up communal interests.

Regarding scale, at Çukuriçi Höyük, it has been shown in Chapter IV that metalworking took place within family production units, as attested through the ethnographic contextualization of local architecture and the agglutination process at the site during EBA 1. The evidence also does not support the existence of workshops of unrelated individuals at Çukuriçi Höyük, since houses at this site were multi-crafting spaces, including the production of metals, textiles, bone tools, as well as other daily activities such as cooking and food consumption. If related individuals produced metals, then it remains likely that men, women, and children were involved in metalworking at Çukuriçi Höyük. This has led to our characterization of this kind of combination across a local settlement between most local households with semi-specialized craft production as *generalized craft integration*.

Regarding the intensity of arsenical copper production, it can be concluded that metalworkers at Çukuriçi Höyük were part-time rather than full-time specialists, in which the line of reasoning is similar to scale. A variety of activities within houses allow for reconstruction of dwelling spaces rather than solely working spaces at Çukuriçi Höyük. Instead of representing workshops for full-time specialists, the evidence supports houses and homes that contained metalworking expertise in a part-time, possibly seasonal manner.

¹⁵¹⁶ Costin 1991.

In such a setting, producing metals for local consumption and regional exchange, dwellers at Çukuriçi Höyük could therefore engage in exchange with other sites where metalworking was nucleated and limited, like an island, to one household within the settlement, which could have triggered socio-political centralization at the dawn of the Early Bronze Age. However, in this case, it seems that the island sites were more affected by either ecological, social, or environmental circumscription than, for example, Çukuriçi Höyük. And whereas under circumscription warfare and consequently socio-political centralization is the seemingly inevitable consequence, dwellers at Çukuriçi Höyük left their homes before such homogeneous centralized structures emerged in western Anatolia.

Such variations of degree in economic specialization were neither a unique nor a novel phenomenon within the Aegean. As can be seen from Late Neolithic Thessaly, the emerging centre of specialized pottery production reached long distances, but again not necessarily through a chiefly coercion of polities beyond single village sites. These sites also had direct links reaching Melos, although in a much lower proportion when compared to the EBA 1 western Anatolian sites. As is well known, Late Neolithic potters at Platia Magoula Zarkou gained their fame for grey on grey pottery production, whereas Çukuriçi Höyük reached the same through specialization in metallurgy. Within a dynamic network of interregional connections and economic interactions that always imply social bonds between members of different communities, the available data provide evidence that Çukuriçi Höyük's metalworking society was embedded into the EBA 1 'cultural koine' through a decentralized socio-political formation. It can be said that no overarching hierarchical structure, such as a chiefdom polity, embedded Çukuriçi Höyük into a wider regional organization such as a chiefdom.

The main contribution in my conclusion is to provide a changing picture of the earliest period of the Bronze Age in western Anatolia which does not equate metalworking societies with an *a priori* centralized socio-political centralization. And although the latter is well known in socio-cultural anthropology, based on multiple ethnographic reports not limited to Africa, the record from Çukuriçi Höyük at the dawn of the Early Bronze Age can now serve as one of the examples of such decentralized, metalworking societies as well.

To comprehend this *per se* and to allow the material data to speak for themselves, three predispositions require some change. First, we have to chase away those ghosts of the past to finally understand that there is no reason to assume that metalworking societies should be organized into centralized chiefdom constellations. Second, we should detach from those widely shared archaeological interpretations of metalworking, which commonly turn metalworking households into workshops rather than recognizing households as a main locus of part-time specialization and innovation at the dawn of metalworking societies.¹⁵¹⁷ Third, we should embrace a notion of a complex social and regional landscape in which different sites may have specialized in the production of different products, without necessarily being subsumed in social and political unification. Ostensibly well-connected regions are commonly interpreted as socio-cultural and political units, but their connectedness does not necessarily imply political unification. It can also unfold through cross- and interregional networks without being 'unified'.

Much in the ethnographic record speaks about such non-unified constellations connected through networks. It is now time to embrace such an alternative framing within archaeology as well.

¹⁵¹⁷ A similar concern in connection with early metallurgists has previously been raised elsewhere (Kovacevich 2016, 306).

VIII.1. Households Embedded in Local and Regional Mixed Economies

This research has examined the role of households at the dawn of the Bronze Age in the Aegean basin from socio-cultural anthropological perspectives. The research project was undertaken through collaborative interdisciplinary research between four early-career researchers: two archaeologists, a zooarchaeologist, and me, a socio-cultural anthropologist. The research project relied on a household archaeology approach, through which pottery, small finds, and animal bones were analysed at the two prehistoric sites under investigation: Çukuriçi Höyük (western Anatolia, Turkey) and Platia Magoula Zarkou (Thessaly, Greece). No new ethnographic data were collected for my project through participant observation due to time and space limitations relevant to the archaeological data of this study. Instead, this research exclusively relies on the empirical archaeological data collected and analysed by my research colleagues as well as other scholars, who have dealt with archaeological material from the two sites under investigation. Historical anthropology and historical ethnography were some of the main methods employed in this study. I studied the anthropological literature concerning non-state societies described during the past decade, with and against the grain. These anthropological insights served as an entry point for addressing the prehistoric material, which I examined through the lens of households and their organization to understand the local social organization at each of the two sites under investigation. The primary objective of this research was to understand the role of households at the dawn of the EBA and, consequently, to scrutinize the potential forms of socio-political organization at the two sites respectively, through comparative historical anthropological insights.

To conduct an inquiry into how dwellers at Çukuriçi Höyük and Platia Magoula Zarkou were organized in a more or less hierarchical or ‘egalitarian’ manner, and to address the research objectives stated above, two sets of research questions guided my research. The first set of questions examined the role of households. These have been addressed by means of a bottom-up, comparative approach to studying archaeological material from the settlements guided by household archaeology, examining the role of households and relations between households on a local, settlement-related scale, rather than comparing whole archaeological cultures through a top-down approach:

- What were the roles of households or of ‘householding’ in the Early Bronze Age in eastern Mediterranean regions, and how can households be defined?
- Did households in Çukuriçi Höyük and Platia Magoula Zarkou correspond to the core units of a DMP¹⁵¹⁸: i.e., were they primarily self-supporting units based on production for local consumption, or were they more specialized units¹⁵¹⁹ primarily geared to production for exchange, and even, to an extent, for tribute as well?
- How can anthropology’s insights into ‘Bronze Age economics’¹⁵²⁰ be reconciled with answers to these questions?

The results relevant to these research questions showed that households at Çukuriçi Höyük and Platia Magoula Zarkou were of the DMP type, primarily geared for local consumption but simultaneously embedded in regional mixed economies. At both sites under investigation, households always maintained social and economic relations with other households inside their settlements and elsewhere in the region. Although primary subsistence activities were organized within or among households, during the Late Neolithic and the EBA these households and settlements were *a priori* entangled in regional social networks and embedding regional economies. Regional mixed economies at these sites included unevenly distributed centres of

¹⁵¹⁸ Sahlins 1972.

¹⁵¹⁹ Earle 2002.

¹⁵²⁰ Earle 2002.

craft specialization (Chapters IV and VI) that were integrated into their local settlement and its DMP. These households (and consequently these societies) interacted with others across the wider region, were in some ways interdependent, and developed in relation to one another (Chapters VI and VII). For the reasons stated above, the long-standing perception that the village farming settlement was the basic archaeological reality in the EBA cannot be supported for either the Late Neolithic or the EBA in the Aegean basin. Neither households nor village settlements were self-sufficient, but were simultaneously embedded into regional economies. This is of particular theoretical importance, since if we consider that ‘the elementary forms of kinship, politics and religion are all one’,¹⁵²¹ then economics, as a factor embedded into all three of these spheres, certainly supports the regional (and not only the site-specific) coevolution of kinship, politics, and religion in Late Neolithic Thessaly and EBA western Anatolia and Thessaly.

Even though the households examined here were embedded in regional economies, this does not imply that they were primarily geared to production for exchange (Chapter IV). Both farming and craft production were integrated into the DMP rather than being an individual’s full-time expertise, conducted by different households respectively (Chapter IV). Pooling within and sharing between households was an important socio-economic practice at each site, which created a meshwork of social relations between dwellers in each location (Chapters VI and VII). Tribute as an economic practice in which a particular household on-site would pool either agricultural, hunted, or crafted goods, including precious or prestige goods, was not observed at either of the two sites. At Çukuriçi Höyük, metalworking was a part of the *generalized craft integration*, in which knowledge of metalworking was widely shared between households, without any inherent political centralization, although this is generally *a priori* associated with metalworking societies (Chapter IV). By contrast, evidence found at Late Neolithic Platia Magoula Zarkou shows it to have been a regional production centre for grey on grey pottery in which potters were organized into *restricted craft integration*, which played an important role in regional economies, marriage transactions, and the negotiation between men and women within what in all likelihood was a patrilineal context (Chapter VI).

At neither of the two sites were any ‘extreme households’ – those of the landless and those controlling larger areas of land – identified. Instead, pooling within households and exchange between households is evident from the archaeological record, which speaks against Wilk and Rathje’s hypothesis that ‘in general, band and urban, state-level societies stress *exchange* between households and groups, while predominantly agricultural societies and those with mixed economies *pool within* the household’.¹⁵²² On the contrary, no such stark differences between these types of societies can be observed, as the dwellers at Çukuriçi Höyük and Platia Magoula Zarkou during the Late Neolithic/Late Chalcolithic and the EBA both relied on pooling within households and exchange between households not only on-site, but also with dwellers within or outside the wider region.

These results provided the basis for a bottom-up understanding of household organization in the Aegean basin at the dawn of the Bronze Age, which was subsequently compared against the models of social organization in non-state, tribal societies (Chapter II), guided by the following research questions:

- Which, if any, of the proposed models of social organization: a) a centralized chiefdom (e.g. a chiefdom with a unilineal descent system or a chiefdom with a conical clan structure), or b) a decentralized, acephalous tribal society (e.g. a segmentary lineage system, or a big man or great man society) is appropriate to describe social organization in these settlements at the dawn of the Bronze Age?

¹⁵²¹ Sahlins 2008, 197.

¹⁵²² Wilk – Rathje 1982, 627, italics mine.

This question was addressed through comparison between the ethnographic and the archaeological data. The answer to this question remains only partial. Through multiple lines of evidence (e.g. local environmental conditions, animal breeding strategies, settlement patterns, the organization of houses, and the distribution of specific craft and other domestic activities at these sites), I was able to construct an argument that these small-scale societies, despite a cosmopolitan spirit that had been developing since the dawn of the Bronze Age, were organized into multiple modes of social organization. An internally connected structural, non-state socio-political heterogeneity thus characterized the ‘cultural koine’ landscapes in these parts of the EBA Aegean basin.

Before proceeding to an examination of these potential imaginary communities or the ideal types of social organization, I emphasize here a key feature that may be self-evident. Because of its importance, however, it is a feature that deserves due emphasis. Almost half a century ago, Colin Renfrew’s seminal study of EBA social organization in the Aegean basin argued that the ‘basic archaeological reality is the village farming settlement’.¹⁵²³ In the archaeological record I studied, however, a ‘village farming settlement’ cannot be treated as the ‘basic archaeological reality’.¹⁵²⁴ This insight does not stem from an anthropological generalization,¹⁵²⁵ but rather from the examination of the pertinent material data, which includes Late Neolithic and EBA sites on the Thessalian plain and sites from the EBA 1/2 period in western Anatolia. In all of the cases examined, the so-called ‘village farming societies’ did not exclusively rely on local resources, but acquired from afar the objects and raw materials necessary for a society’s everyday activities and reproduction, and also for the maintenance of peaceful relations with their neighbours. In these cases, households always maintained social and economic networks within their so-called ‘village farming settlements’,¹⁵²⁶ as well as across a broader region. Both EBA and Late Neolithic households and villages were *a priori* entangled in regional social networks embedded in regional economies, and therefore cannot be considered as either a bounded basic archaeological reality, nor as politically, socially, or economically autonomous, isolated units.

What exactly do we mean by ‘households embedded in local and regional economies’? Was that not the case for all sedentary, non-state societies such as tribes? Was that specific to only a few of them? Well, although both local and regional economies were crucial for their sustainability, the latter point, namely the importance of regional economies, has vanished as a crucial aspect within most discussions about a DMP. In the Aegean, obsidian turned into a possible prestige good during the EBA. However, obsidian was attested on both sides of the Aegean basin, in Thessaly and western Anatolia starting in the Palaeolithic, when the islands between Melos and the seashore were still not inhabited. What does that tell us about households? Does this entail any changes in households or household economies? The idea of households embedded in local and regional economies pushes us to reconsider this important, yet gradual change towards a more sedentary lifestyle. More or less sedentary groups continue to interact with other groups, not only within settlements and in their immediate vicinity but also with those far away. This may serve various purposes – be it access to certain raw materials or desirable foods, marriage exchange and alliance-building, or even to facilitate travelling. As shown in various chapters of this thesis, embarking on such journeys is common to all non-state societies. Yet the purposes and organization of journeys may vary starkly between more or less decentralized or centralized socio-political constellations. In centralized chiefdoms such journeys may often, though not exclusively, have been organized by the chiefs and

¹⁵²³ Renfrew 1972, 366.

¹⁵²⁴ Renfrew 1972, 366.

¹⁵²⁵ An autonomous village as a type of social organization was proposed as a stage in social evolution and has been promoted as such within socio-cultural anthropology.

¹⁵²⁶ Renfrew 1972, 366.

their entourage to acquire prestige goods from afar. In decentralized political constellations, embarking on such journeys was not a choice but a necessity. In the latter case, acquiring precious goods that are lacking within the local village or tribal territory, yet indispensable for everyday use or for rites of passage, such as initiations or at marriage, ensured a successful local reproduction. Therefore the productive use of local tribal territory through pooling within households, and those wider regional and interregional interactions based on exchange with groups residing at a distance from one's tribal territory is the twofold basis for the DMP.

Although Sahlins himself understood the importance of regional exchange, this is not reflected in the coining of a term. As he proposed, 'the domestic economy cannot be 'seen' in isolation, uncompromised by the greater institutions to which it is always subordinated'.¹⁵²⁷ Sahlins's term Domestic Mode of Production is probably not the best term for the economic system described above from today's perspective. In its time, however, it was obvious that no 'mode of production' in the western Marxist sense popular at the time had ever existed in any pure form. For the theoretical positions shared by Sahlins it was also clear that there was never any 'production' without 'circulation' including exchange and sharing. By not explicitly giving regional exchange equal importance in its terminology, today the DMP is considered as a particularly domestic system, rather than regional as well. Furthermore and importantly, it is a regional system of mixed economies, as is highlighted in this contribution through both archaeological and ethnographic examples. A better description of households fitting with Sahlins's original description of DMP would be households embedded in domestic/local and interregional economies.

VIII.2. A 'Great Man' Society at Çukuriçi Höyük

Çukuriçi Höyük provides evidence for a comparatively 'egalitarian' society, which may have been organized as either a segmentary lineage system, or a great man or big man society. In addressing the data in question, the first model – the segmentary lineage system – could not be adequately explored, since complex genealogical trees could not be reconstructed in the absence of any convincing evidence. One possible material proxy for the existence of marked genealogies could be the continuous transmission of houses from one generation to the next (Chapter IV), which may have resulted in shallow or deep genealogies. The possibility that at Çukuriçi Höyük – or other regional sites such as Troy – an 'egalitarian ethos' was supported through recognition of common genealogy should remain a possibility, yet this cannot be explored fully due to the lack of either written sources or oral histories. Layers of more than three subsequent generation-based burials at Çukuriçi Höyük and Troy are absent, so no aDNA analyses have been possible to discuss genetic indications for strict unilineality. Therefore, the absence of such burials and bioarchaeological examinations indicates that unilineality was not observed in any strict or rigid sense of the term. Despite the problematic nature of archaeological data in supporting the existence of segmentary lineage systems for these sites, it should be noted that this model of social organization can be compatible with sedentary farmers with a mixed regional economy and the use of metal tools, and should not be discarded *a priori* as a possibility for similar metalworking societies (Chapter IV).

The second model that appears to be suited to some of these EBA 1/2 'egalitarian' sites is the model of big man societies. At Çukuriçi Höyük, however, the evidence is unconvincing for the occurrence of this type, due to the divergent record from caprine and cattle culling profiles. In the ethnographic literature, big man societies are commonly characterized through household-based 'self-sufficiency' and the absence of a redistributive economy; strong competition between households within a village (and also a region); the organization of communal

¹⁵²⁷ Sahlins 1972, 75.

feasts, in which pigs (or in this case: possibly other animals) would be killed communally to facilitate a new cycle of competition between big men; and the development of regional mixed economies. In this case, among big man societies, pigs would not be slaughtered young (for household consumption) but would be reared and fed into adulthood. However, in the culling profiles found at Çukuriçi Höyük, its households do not appear to comply with such practices. By contrast, the dwellers at Çukuriçi Höyük slaughtered both sheep and goats at a young age, even below 6 months old. This indicates that the intentional increase of ‘wealth’ stored in caprines was not a primary stimulus for competition between households on-site. Another line of evidence against the presence of a big man society at Çukuriçi Höyük during EBA 1 can be inferred from the rather restricted regional networks of obsidian and other imported goods. Whereas Troy and Demircihöyük were integrated into both the Melian and central Anatolian obsidian networks, dwellers at Çukuriçi Höyük relied heavily on Melian obsidian throughout EBA 1 (Chapter VII). This indicates that reliance on and the expansion of trading networks or alliances in all directions does not appear to have been the case for Çukuriçi Höyük, though it is typical for big man societies.

At Çukuriçi Höyük, the presence of a variety of great man social organization,¹⁵²⁸ which is compatible with the archaeological notion of a ‘heterarchical’ social organization¹⁵²⁹ (see Chapter II), appears to have been much more likely during EBA 1. During the Bronze Age, the site was located on fertile alluvial plains, which provided fresh water and a supply of clay for producing handmade pottery locally. The most common EBA 1 ceramic assemblage comprised food preparation wares including tripod cooking pots with a capacity of approximately 4 litres, which shows that daily meal preparations at the site took place in small groups, with a maximum of 6–8 people in each. Dwellers at the site grew domestic plants, such as pulses and cereals, and also collected wild plants and nuts. They herded domestic animals, predominantly sheep and goats, yet they also hunted wild animals and collected maritime resources. With regard to crafts, at Çukuriçi Höyük metallurgy was well integrated into the DMP, a type I addressed as a *generalized craft integration* (Chapter IV). Unlike previous studies, which claimed that metalworking societies must necessarily be centralized with metallurgists as ‘attached specialists’ working for the elite, the record at Çukuriçi Höyük shows that (arsenic) copper smelting can be integrated into the DMP without utilization of the plough and without the presence of centralized local political structures. Neither the archaeobotanical nor the zooarchaeological record at Çukuriçi Höyük supports the use of the plough at the site: therefore rain-fed horticulture, most likely without the use of an ard or plough, remained human labour-intensive. As observed from other ethnographic cases, it is very likely that metalworking at Çukuriçi Höyük was a seasonal craft – not performed by itinerant smiths, but by the dwellers themselves. Moreover, metalworking was not performed outside the living quarters, but took place at the same hearths where the food was prepared, alongside the women and children, within the house. This implies that at Çukuriçi Höyük metalworking cannot be interpreted as an exclusively male craft or area of expertise, but rather as a craft that cut across the gender and age of household members at the site.

While some authors have previously argued that the basic archaeological socio-economic unit was necessarily a village, this was unquestionably not the case at Çukuriçi Höyük. At this site, dwellers could barter their locally produced arsenic copper objects for wool, which was only produced locally in small quantities. Therefore, the exchange of commodity items such as metals, wool, and obsidian from the Cycladic island of Melos was inherently integrated into mixed regional economies, which linked the single sites into dense exchange networks that extended into other parts of the Near East and to the Thessalian plain. Furthermore, although

¹⁵²⁸ Godelier 1986a.

¹⁵²⁹ Horejs 2016b, Cveček – Horejs 2021.

the metric technology of Near Eastern weights was adopted at Çukuriçi Höyük during EBA 1, this innovation did not immediately lead to materially evident changes in either settlement organization or diet, nor did it lead to the expansion of the settlement or the intensification of trading links to the East. Instead, dwellers at Çukuriçi Höyük maintained stronger links to the Aegean world, which may have been one of the reasons why dwellers abandoned the site before EBA 2 (Chapter VII). Without evidence for political centralization, yet with strong evidence for both regional and long-distance supra-regional exchange, the EBA 1 dwellers at Çukuriçi Höyük share multiple structural similarities with the Baruya, the great man society documented for the Papua New Guinea highland fringe. The long-established anthropological concept of a great man social organization is therefore compatible with the archaeological proposal that Çukuriçi Höyük was organized heterarchically,¹⁵³⁰ similar to what archaeologists would describe as ‘house societies’, but without the permanent ‘houses’ or the ‘elites’ competing on-site or within a region (see Chapter IV).

In considering the emergence of material inequalities between households regarding the amount of obsidian accessible to them and their level of metal production, I agree with Kouka:¹⁵³¹ early chiefdoms may have emerged in the eastern Aegean islands and western Anatolia during EBA 1, before the visible material differences between upper and lower towns became the norm during EBA 2.¹⁵³² In light of Kouka’s analysis of household organization on eastern Aegean island sites¹⁵³³ and the collaborative analyses of households at Çukuriçi Höyük,¹⁵³⁴ the site of Çukuriçi Höyük does not, however, seem to fit fully into the unifying concept of an eastern Aegean EBA 1 ‘cultural koine’. Unlike other sites, where metalworking was clustered with a concentration of imported goods, this key material difference between households could not be observed at Çukuriçi Höyük; therefore, this does not necessarily comply locally with a chiefdom form of social organization during the EBA, which would be expected from sites in the EBA 1 eastern Aegean ‘cultural koine’.¹⁵³⁵

Regarding the anthropological and archaeological literature (Chapter II), the EBA 1 eastern Aegean island sites – including Bakla Tepe and Liman Tepe – may have been organized into *chiefdoms with unilineal descent, without a conical clan structure*, although unilineal genealogies could not be reconstructed. Why chiefdoms with unilineal descent? The available record for these sites does not support a more ‘egalitarian’ on-site organization such as a segmentary lineage system, great man or big man society. In none of the latter cases of ideal types, were material social inequalities between different households within a single village site inherited. Instead, inheritance of any crucial position of power or centralized office was discouraged, which is not fully compatible with evidence from some of the coastal eastern Aegean and western Anatolian sites. There, metalworking households were restricted to a single or a few households per site, which also contained more abundant clusters of foreign objects such as Melian obsidian or foreign pottery, over multiple occupation horizons. This seems to point towards a distinct, fixed, spatial and social status of metalworking households at these sites, yet without class differences between them, most likely indicating the emergence of *chiefdoms with unilineal descent*, resembling the material record documented at the chiefly village of Omarakana at Kiriwina¹⁵³⁶ or any patrilineal counterpart to that. It could also indicate *chiefdoms with a conical clan*, such as the Tikopia,¹⁵³⁷ rather than those forms

¹⁵³⁰ Horejs 2016b, Cveček – Horejs 2021.

¹⁵³¹ Kouka 2002; Kouka 2016a.

¹⁵³² Şahoğlu 2005; Şahoğlu 2008.

¹⁵³³ Kouka 2002.

¹⁵³⁴ Röcklinger 2015; Horejs et al. 2017; Cveček 2020; Emra et al. 2020; Cveček – Horejs 2021; Cveček – Emra 2021.

¹⁵³⁵ Kouka 2002; Kouka 2016a.

¹⁵³⁶ Malinowski 1922; Malinowski 1929.

¹⁵³⁷ Firth 1959; Firth 1983.

of conical clan chiefdoms described in Hawaii.¹⁵³⁸ These households containing metalworkers and traders were previously interpreted as the households or the seats of chiefs who emerged during the EBA 1 period at coastal western Anatolian sites.¹⁵³⁹ This material evidence provides support for the emergence of unilineal descent group chiefdoms, most likely patrilineal, as the dwellers at each of these sites also relied on large domestic animals for subsistence on the eastern Aegean islands and at coastal western Anatolian sites during EBA 1. As these sites were part of the eastern Aegean EBA 1 ‘cultural koine’, this suggests that different models of social organization coexisted in space and time at the dawn of the EBA 1 in the Aegean basin (Fig. 40).

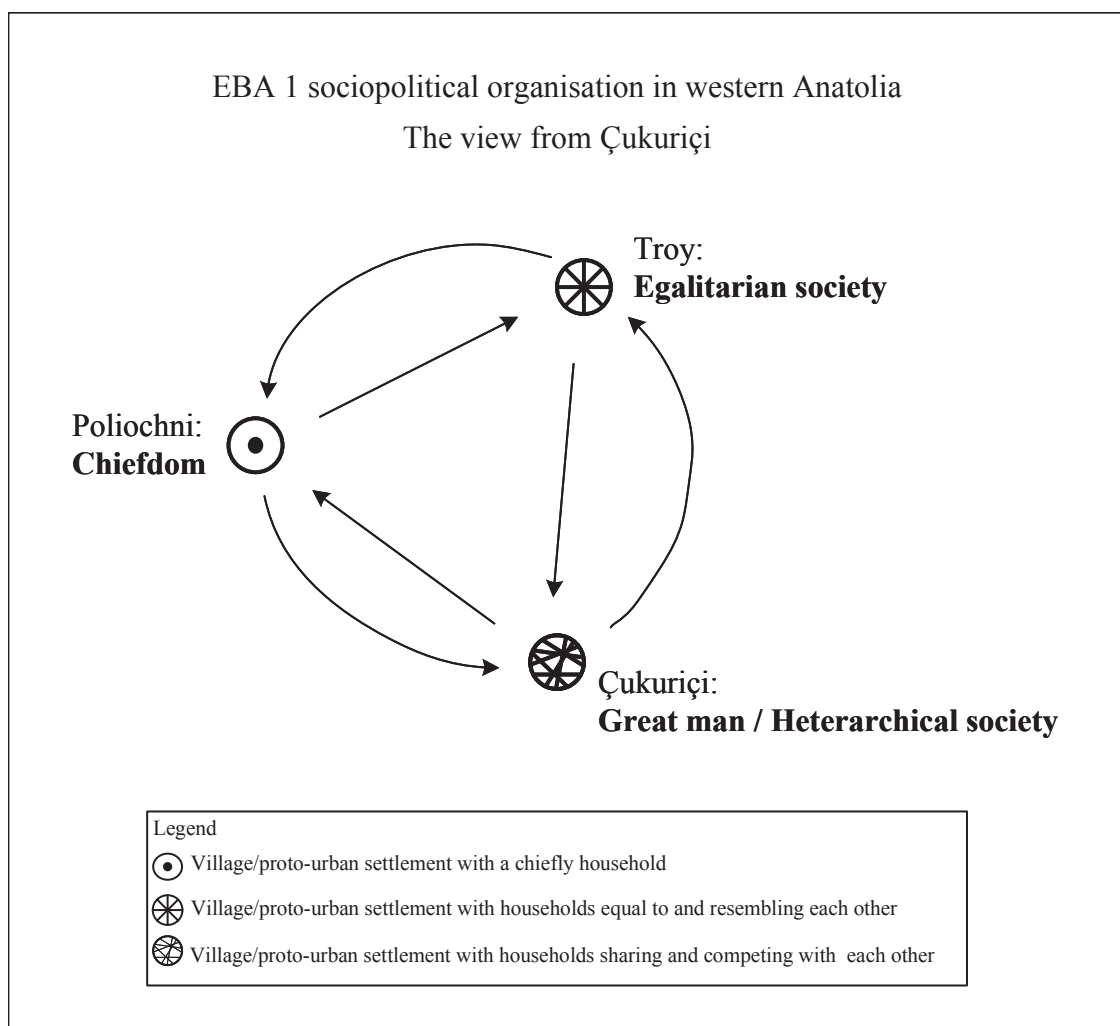


Fig. 40 Different models of socio-political organization that coexisted and codepended on each other during the EBA 1 in western Anatolia (for Poliochni Blue see Kouka 2002; Kouka 2016a; Kouka 2016b; for Troy I see Ivanova 2013; Ivanova 2016)

¹⁵³⁸ Sahlins 1958; Earle 1978; Earle 1998b.

¹⁵³⁹ Kouka 2016a.

VIII.3. A ‘Big Man’ Society at Platia Magoula Zarkou

At Platia Magoula Zarkou, the archaeological record provides inherently different results from those observed at Çukuriçi Höyük. Dramatic changes in the course of the Pineios River brought a shift from floodplain cultivation during the Middle Neolithic to agriculture based on rain-fed mixed farming without a plough during the Late Neolithic, and with a plough during the EBA. Unlike at Çukuriçi Höyük, where goats predominated in the zooarchaeological record, dwellers at Platia Magoula Zarkou mainly herded sheep and produced wool during EBA 2, which they may have exchanged for other non-locally available goods. A segment of dwellers at Platia Magoula Zarkou may have practised transhumance, as two different ecological niches existed nearby. Like at Çukuriçi Höyük and other regional sites, dwellers at Platia Magoula Zarkou also hunted wild animals and raised domestic crops, but they had much less access to non-local goods such as Melian obsidian, regional resources of chocolate flint, and even metals, since only a single copper pearl was identified at the site. Therefore, it is likely that spheres of exchange existed during the Late Neolithic and EBA at Platia Magoula Zarkou and in Thessaly more widely. The locally produced grey on grey pottery at Platia Magoula Zarkou could thus only be converted and exchanged for stone tools in exceptional cases, as stone tools and pottery belonged to different spheres of exchange. Thus, although pottery could be exchanged for other subsistence goods that were locally and regionally available, stone tools such as Melian obsidian and chocolate chert could only be exchanged for other rare (and therefore precious) objects.

Moreover, EBA dwellers at Platia Magoula Zarkou may have been agro-pastoralists rather than simply a typical sedentary farming community. In this case, the stone tools would only occasionally have been used for the cultivation of crops, and the main subsistence would derive from animals, secondary animal products, and locally produced pottery. The culling profiles at Platia Magoula Zarkou stand in stark contrast to those at Çukuriçi Höyük. On the one hand, this provided evidence that during EBA 2 sheep herding and wool production intensified; but on the other hand, it also shows that sheep rather than goats reproduced better than other animals. Goats were nevertheless irreplaceable as they served as the ‘brain’ in the herd of sheep, which can be widely observed from ethnographic descriptions. During the Late Neolithic, when Platia Magoula Zarkou was a pottery production centre, it appears more likely that, along with domestic animals and animal products, pottery was bartered for crops and other organic goods, but rarely converted into stone tools – which is often the case in ethnographically documented agro-pastoral communities. The evidence examined for Late Neolithic Platia Magoula Zarkou (Chapter VI) supports a multicentric regional economy during the Late Neolithic and EBA, in which local and abundant grey on grey pots were included in different exchange spheres from foreign and rare obsidian and flint stone tools.

Concerning the five models of social organization under scrutiny and their possible relevance at Platia Magoula Zarkou, the evidence under consideration does not support a detailed on-site understanding of the household organization, as only one room was recovered from the site. The animal bone analysis from that one room at Platia Magoula Zarkou, however, largely corresponds to the results at other regional sites. It is especially important that at Platia Magoula Zarkou during EBA 2, sheep and goats were killed at an older age than during the Neolithic: however, the slaughter rate was nowhere close to the mortality rates that can be observed from ethnographically documented pastoral societies. Therefore, the record at Platia Magoula Zarkou supports a sedentary, rain-fed mixed farming agro-pastoral community (with possible transhumance), utilization of the plough, and a specialization in wool production (Chapter V). In comparison to the Late Neolithic record, when dwellers at Platia Magoula Zarkou specialized in pottery production, it appears that the growing importance of sheep during EBA 2 coincided with the longer lifespan of sheep, and therefore access to secondary products such as wool. In comparison with contemporaneous western Anatolian EBA 2 sites, where cattle significantly increased in importance in comparison to sheep and goats, the

emergence of a ‘cattle culture’ cannot be observed at Platia Magoula Zarkou. In western Anatolia, the so-called EBA 2 cattle culture coincided with widely attested chiefdoms, visible through two-part settlement patterns, and the hoarding of metals and other prestige objects in specific central households within sites. The same, however, cannot be confirmed for Platia Magoula Zarkou. Therefore it seems that during EBA 2, dwellers in western Anatolia and the hinterland Thessalian plain sites lived rather parallel realities, in some way linked through the leaking networks of Melian obsidian, which continued to play a significant role in regional economies even as bronze (rather than solely copper) tools gained in importance.

At Late Neolithic Platia Magoula Zarkou, the house model provides valuable evidence of not only emic perceptions but also symbolic reality during this period. The dwellers certainly distinguished between male and female, junior and senior members of the household; however, we cannot assume that the larger size of the female figurines corresponds to any higher socio-political power of women relative to men.¹⁵⁴⁰ Instead, I argue that women could be more powerful within the house rather than outside of it, which is compatible with many versions of a patrilineal society. Considering the ethnographic record, the Late Neolithic record, and the Bronze Age record, there are similarities with Melanesian big man societies – such as involvement in far-reaching exchange networks, and the competitive production of pottery between households on-site as well as across the broader region. As I showed in Chapter VI, the house model does not support the necessary existence of matrilineal societies in which women played a central role both inside and outside the house. Instead, the Late Neolithic house model at Platia Magoula Zarkou may be interpreted as an example of women seeing themselves and being appreciated by others as the ‘centre of the house’ complementary to and embedded within a patrilineal, male-dominated society. At the same time, the house model may represent a precious object which was neither gifted nor bartered, but buried underground: and therefore transmitted. The ritual context within which the house model at Late Neolithic Platia Magoula Zarkou was deposited in an open space may further indicate that the object represented the inverse of the reality on the ground, or a so-called ‘anti-structure’,¹⁵⁴¹ common in rites of passage, which could include the burying of an old house, or the foundation of a new one.

VIII.4. Limitations

As with any study, this one is not without its limitations. The primary literature reviewed for this research mainly comprises English- and German-language sources. The former was of greater importance for the anthropological literature, whereas the latter was of crucial importance for regional comparisons with the Thessalian sites of Pevkakia and Argissa Magoula, which were excavated and published by German-speaking scholars. A majority of sources for the western Anatolian sites were published in English, but Turkish and Italian sources are also important. These were partially considered but, due to my lack of proficiency in either Turkish or Italian, there were some drawbacks. More research and publications are needed, particularly for EBA 1 at sites such as Liman Tepe and Bakla Tepe in Izmir. At these two crucial sites for comparison, which are potentially regional centres, the EBA 1 layers have been excavated but await detailed and comprehensive publications that could contribute to a better understanding of regional western Anatolian developments at the dawn of the Bronze Age.

Another empirical limitation concerns the unavailability of the EBA 1 burial ground at Çukuriçi and the EBA 2 burial ground at Platia Magoula Zarkou, which could complement the study of households. Although social inequalities during EBA 2 were recorded in both

¹⁵⁴⁰ That Aegean Neolithic imagery was not dominated by female figurines and that gender may not have been a prominent structuring principle, see Nanoglou 2010.

¹⁵⁴¹ Turner 2009 [1969].

settlements and burial grounds in western Anatolia (Chapter IV), and household archaeology therefore remains particularly valuable in discussing social hierarchies and inequalities through lived experiences, the complementary analysis of both settlements and burial grounds from the same site could further highlight differences in reflections of social hierarchies and inequalities between the contexts of the living and those of the dead. As this was not available at the two sites I investigated, apart from for the Late Neolithic period at Platia Magoula Zarkou, I draw some comparative insights from sites that provided this evidence: however, these comparisons should be approached with caution and not understood as definitive.

The final, and conceivably the most important, limitation of this research is the ‘bird’s eye view’ of the archaeological finds which was presented in this book. As I drew upon previously analysed data, I engage little with how the objects were recovered and how they were typologically, statistically, or qualitatively analysed. This area of my research remains in the hands of archaeologists and specialists in a particular body of finds and analysis thereof. From the start of this interdisciplinary project, this was also my intention. The greatest challenge in my research was, rather than analysing archaeological data myself, finding potential anthropological contextualizations of prehistoric material through comparative approaches in which historical anthropology provided a central point of reference. I have not centred my research on a specific type of material (e.g. stone tools, pottery, architecture, animal bones, etc.) but extracted the most important insights from these individual bodies of analyses, with the accompanying intention of not missing the forest for the trees. If the reader is interested in trees only, then this book will not be satisfactory, apart from the reference list for the original archaeological sources. By contrast, if the reader is interested in a larger cross-cultural framework to contextualize and understand non-state societies at the dawn of EBA 1 in the Aegean basin with and not without socio-cultural anthropology, this book will be of great value.

VIII.5. Recommendations for Further Studies

Several possible recommendations for future research can be derived from my studies. From the outset, it was taken into account that differences within a household cannot be observed due to the methodological approach undertaken, namely the household archaeology approach, which considers households as the smallest socio-economic units that can be detected archaeologically for more or less sedentary societies. Yet, with state-of-the-art methods of analysis, including chemical analysis of soil from settlement floors, isotope analysis and the ancient DNA (aDNA) recovered from human bones (which was not available at either Çukuriçi Höyük and Platia Magoula Zarkou and other regional sites), differences within households rather than only between households¹⁵⁴² may be better understood in the future. Even within ‘egalitarian’ acephalous tribes, such as the great man societies documented in Melanesia, men and women were unequal. Social inequalities within these households were not only reflected in decision-making powers (e.g. male or female leading roles within a household) but also in material forms, since women and men (and seniors, adults and children) within the same household consumed different food and followed gender- and age-based food taboos. These social and material differences are impossible to identify through the available zooarchaeological record, however, though it is likely that this was also the case in prehistory (Chapter VII). Therefore, for the sites where human bones are available, isotope analysis should be carefully examined

¹⁵⁴² A recently published paper on dietary habits based on isotope analyses of human bones showed that during the EBA in Anatolia there was a general degree of homogeneity in dietary habits at intra- and inter-site and regional levels, with diets being predominantly terrestrial C3 based (Irvine et al. 2019). These results correspond to conclusions stemming from our research, yet with isotope analysis it should be possible to address not only intra- and inter-site (dis)similarities, but also differences between groups of persons based on gender and age.

not only by comparing a person's ratio to the site's average ratios, but also concerning the gender and age of the persons examined.

Therefore, in future research, I see a possible and important socio-cultural anthropological contribution to the study of social inequalities within households. These largely new and innovative analyses have a strong potential for a better and more critical contextualization through grounded ethnographic realities rather than by only equating genes with languages, or as a necessary (and only) indicator of kinship or a person's descent and background. Through the integration of socio-cultural anthropologists into interdisciplinary research teams dealing with ancient genetics and isotope analyses, the current uniform – and well-circulated ground-breaking results in the media – that 'foreign' individuals were either buried away from their natal homes or that they were married outside of their places of origin, should come as no surprise. As I showed in the literature review, socio-cultural anthropologists were aware that tribal communities were neither genetically nor culturally or ethnically coherent (although some ethnographers have portrayed them as such), and many non-state societies maintained mechanisms through which they could integrate non-related individuals into their households.¹⁵⁴³ Therefore, these insights should be further addressed alongside scholars dealing with ancient genetics. From the ethnographic record as well as through those prehistoric accounts I dealt with in my study, these either acephalous or centralized imagined communities had fluid boundaries and territories. Not only did they need to sustain links and networks beyond their local village settlement, but they also relied on a meshwork of regional economies for reproduction. Only through such networks could the ostensibly locally grounded groups have established lasting relations between human and non-human actors.

Alternatively, as mentioned above, a large body of new strontium analyses interprets different amounts of strontium present in bone samples as an indicator of a person's foreign origin. Taking ethnographic data into the account, however, it could well be that these individuals grew up in the same place, even within the same household, but may have maintained different diets throughout their lives (Chapter VII). Whether this was also the case in prehistory could be examined through these new methods. Within interdisciplinary teams, I see a socio-cultural anthropologist not only as an important contributor for the contextualization and critical interpretation of these finds, but also as a key member for generating well-informed and ethnographically-grounded hypotheses that could be tested against the bioarchaeological data, potentially leading to new theoretical and empirical results.

Another important future contribution stemming from a close collaboration between prehistoric archaeologists and socio-cultural anthropologists can be identified in terms of re-opening 'old debates' such as the role of matrilineality in Old World prehistory. I highlighted the importance of such debates by discussing the interpretations of the house model at Platia Magoula Zarkou (Chapter VI). I showed that contextualization and interpretation *with* rather than *without* socio-cultural anthropology may yield some fruitful results. The re-opening of 'old debates' would be timely, since a recent study of aDNA and isotope analyses supported kinship-based social inequality in Bronze Age Central Europe.¹⁵⁴⁴ If compared to my extensive review of the models of non-state tribal societies (Chapter II), in which I showed the importance of kinship ideology in non-state societies for the emergence of inequalities between social groups, the latest research outcomes are neither ground-breaking nor surprising, but complementary. Even so, the aDNA analyses are crucial as (alongside the archaeological contextualization) they provide empirical evidence for the existence of such kinship-based

¹⁵⁴³ This was a common practice among great man and big man societies. They managed to establish peaceful relations on the boundaries of their communities not only through barter and commodity exchange, but also through marrying some persons outside their tribal territory and marrying others in. These marriage alliances then led to an intensive gift and commodity exchange of precious goods that could not be found locally within their tribal territory.

¹⁵⁴⁴ Mittnik et al. 2019.

inequalities millennia ago, which are crucial for the advancement of theory building and the translation of the ideal types of social organization between socio-cultural anthropology and prehistoric archaeology. Therefore, I imagine future collaboration between geneticists, isotope specialists, and socio-cultural anthropologists, in which the role of the socio-cultural anthropologists should be to critically assess and comparatively address the outcomes of genetic and isotope analyses against the ethnographic record. This interdisciplinary scientific practice could be crucial for the advancement of the understanding of non-state social inequalities, political economies, and the relations between as well as within their households as the key conjunctures in which domestic and regional economies collided.

Concerning the study of settlement patterns in prehistory, I have shown that more data should be collected for studying the emergence of a particular settlement, rather than only comparing the completed and static images of regional settlement patterns to each other (Chapter IV). As I showed through ethnographic analogies, the settlement patterns usually follow a local, internal logic, which structures not only marriage and transmission practices but also houses, including their construction, maintenance, and transmission. Prehistoric archaeologists could also study not only single but also groups of houses as processes with a (con-) structural logic, as a proxy for social relations between household groups. A specific focus on conducting diachronic material studies of the village and semi-urban spaces¹⁵⁴⁵ should also be encouraged among socio-cultural anthropologists and ethnoarchaeologists. The latter two groups of scholars should preferably not only focus on documenting static settlement plans, but also track and trace their development through either diachronic material studies or extensive oral histories. Through a site-based diachronic reconstruction of architecture and social relations underlying settlement patterns, it is possible to address the internal logic, processes, and reasons behind the development of a particular settlement pattern, which could then be utilized for the further contextualization of prehistoric realities.

Before this study, I could barely imagine that there was a research gap in the utilization of anthropological literature on the big man and great man societies for understanding European prehistory.¹⁵⁴⁶ Apart from Timothy Earle and a few others who inspired my work, I was hard-pressed to name other prehistoric archaeologists who analytically utilize ethnographic sources to understand Bronze Age social realities.¹⁵⁴⁷ However, a majority of scholars who utilize the household archaeology approach for understanding social organization during the Bronze Age in the Aegean basin argue for either the existence of chiefdoms at one extreme, or more ‘egalitarian’ societies at the other. As I have argued in this book, however, being an ‘egalitarian’ sedentary farming community is an ideological construct rather than a lived reality that has been documented ethnographically. Therefore, at sites where a largely homogeneous settlement organization is complemented with homogeneous diets between different households and the absence of a central building, more research focus should be given to understanding differences within, rather than only between, households and among genders and generations, rather than understanding a household as a homogeneous, balanced and well-meaning unit.

¹⁵⁴⁵ See Kramer 1982; Horne 1994.

¹⁵⁴⁶ In the 1990s, Andrew Sherratt famously argued that the European Neolithic period resembles 20th-century Papua New Guinea as documented by socio-cultural anthropologists, whereas Iron Age Europe resembles early medieval societies and the time of Islamic and early Western contact. The period in between, the Bronze Age, was, according to him, the most ambiguous, and posed the question of whether Bronze Age societies were autonomous like the Neolithic ones, or fundamentally affected by trading activities (Sherratt 1993, 3). For a recent interest in the big man model of social organization applicable to Neolithic rondel builders of Neolithic Europe, see an important recent edited volume entitled *Big men or Chiefs? Rondel builders of Neolithic Europe*, see Řídký et al. 2019.

¹⁵⁴⁷ Rare exceptions include discussions of the sacred in pre-pottery Neolithic Göbekli Tepe (see Dietrich – Notroff 2015) and Lévi-Strauss’s concept of house societies (Chesson 2003; González-Ruibal 2005; Düring – Marciniak 2006; Cultraro 2007; Gillespie 2007; Bami et al. 2016).

VIII.6. Why Studying Early Bronze Age Small-Scale Societies Matters

This study should be of interest to scholars concerned with developments during the earliest centuries of the Bronze Age in the Aegean basin, in particular those archaeologists interested in socio-political organization and household archaeology. Within this field, the current study questions and refutes one of the long-standing interpretations of Bronze Age societies, which claims that all these metalworking groups were necessarily stratified into distinct status groups or emergent classes. By contrast, this study has questioned the extent to which metal production ever substantially influenced the pre-existing modes of subsistence and the making of regional alliances, to truly understand the ‘metal shift’. Without doubt, at the dawn of the Bronze Age metalworking was integrated into multiple socio-political systems, including acephalous, great man and big man societies, as well as chiefdoms with unilineal descent and possibly conical clan structures, coexisting in time and space within the Aegean basin. It was also suggested that a loose correspondence may be established between the anthropological concepts of great man societies and the archaeological notion of heterarchy, which was addressed in detail through the notion of house societies within both socio-cultural anthropology and prehistoric archaeology (Chapters II and IV). Similarly, the archaeological notion of a ‘cultural koine’ (which itself derived from linguistics) may be brought into some loose correspondence with anthropological terminology such as, for instance, ‘macro-cultural’ zones, regions, ‘landscapes’ and ‘socioscapes’, which may be closely interconnected economically, yet are not necessarily fully integrated into one and the same socio-political organization (Chapter IV). The concept of ‘cultural koine’ therefore remains useful in view of insights on regional and wider economies in this study. However, it must include a possibility of heterogeneous socio-political constellations coexisting within the ‘cultural koine’.

Within the field of socio-cultural anthropology, the current study provides an updated review of tribal societies as imagined communities (Chapter II), and extends the application of anthropological theoretical models – other than those of chiefdoms and segmentary lineage systems – to prehistoric data. Moreover, it brings back the category of tribe into the theoretical toolkit, which in this refined form argues for tribes as imagined communities, built from the bottom up, yet as a rather heterogeneous category (Chapter II). Tribal organization as considered in this study can vary in terms of the degree of centralization, as well as regarding the extent to which kinship and genealogy play a role in its emergence. Empirically, this study demonstrates that different modes of social organization coexisted not only in time but also in space.

The evidence analysed for Çukuriçi Höyük and Platia Magoula Zarkou in comparison to each other as well as to other regional sites does not support a coherent and cross-regionally applicable social organization model during EBA 1 or EBA 2 in the Aegean basin. By analysing household organization at Çukuriçi Höyük and Platia Magoula Zarkou, the outcomes of this research show that societies across the Aegean basin at the dawn of the Bronze Age, and even before it, were not politically or economically homogenous. These were small-scale societies on the periphery, in contrast to the urban civilisations to the east and the south. The peripheral small-scale Aegean societies were organized in different tribal political constellations, which in some cases already varied in degree and in other cases in kind during EBA 1.

Among socio-cultural anthropologists, the present study should be of interest to those who value the academic legacy of Marshall Sahlins and Maurice Godelier. This study benefited greatly from their work and aimed at rebuilding the argument around the neo- and post-materialist legacies from late 20th-century socio-cultural anthropology, which remain influential. Secondly, the study was also influenced by the work of Jack Goody, who had a particular interest in the *longue durée* emergence of social inequality and structural similarities within Eurasia. As such, this study provides a complementary picture to Goody’s work, in that it highlights the coexistence of different modes of living across the Aegean basin at the dawn of the EBA.

Although these small-scale societies in the Aegean basin appear to stand in stark contrast to the Near East, they shared important similarities: village sites and households in the Aegean basin, like urban centres in the Near East, were by no-means self-sufficient – and therefore needed to maintain regional alliances and to develop transmission strategies for their reproduction. Their histories did not develop in a vacuum, detached from other villages or urban sites, but through interaction with and a level of interdependence on one another. Although societies in the Near East have been commonly understood as the ‘revolutionizers’, different types of transformation occurred simultaneously within the Aegean basin at the dawn of the 3rd millennium BC. This potentially indicates the strong likelihood of multiple temporalities also existing in prehistory. Studying these societies should matter a great deal to both socio-cultural anthropologists and prehistoric archaeologists for conducting further comparative and multi-scalar analyses into the multiplicity of temporalities at the dawn of the Early Bronze Age. These small-scale Late Neolithic and Bronze Age societies have a power in highlighting local, regional, and supra-regional socio-political diversities that more often than not were embedded (prior to institutionalized centralized socio-political figures) into acephalous, household-based, regional and wider economies. Therefore, it is of key importance to look beyond the ‘success’ sites such as Troy, at other regional and contemporaneous sites, unable to reproduce themselves as a society beyond EBA 1, such as Çukuriçi Höyük. Only by studying the ‘Urban Revolution’ through local and regional perspectives, without inferring socio-political constellations for the whole region or period based on one site, can we draw more comprehensive conclusions and a less biased picture of local histories.

On the home page of the American Anthropological Association (AAA), anthropology is defined as ‘the study of humans, past and present. To understand the full sweep and complexity of cultures across all of human history, anthropology draws and builds upon knowledge from the social and biological sciences as well as the humanities and physical sciences.’¹⁵⁴⁸ If that is what defines anthropology today, then studying small-scale societies in the past and present, through various pools of knowledge, including archaeological material and ethnographic observations among others, should remain key to understanding a wide range of solutions to human problems. These human problems commonly originated through dwelling in a diversity of multi-species landscapes that can be addressed through multidisciplinary approaches, including the natural and social sciences, which is a key feature of four-field anthropology in its broadest sense. The contribution here is just a reminder of what anthropology can be and can do if ethnography and the materiality of things, qualitative and quantitative interpretations of objects, local and wider settings are taken as equal and complementary rather than competing sources of knowledge.

Another question is whether we should consider four-field anthropology as a comparative or non-comparative family of disciplines. What do we do with the knowledge scholars generate within archaeology and anthropology respectively? Shall we study societies exclusively on their own to understand them in their self-ascribed set of meaning only or also through comparison? What is the benefit of this comparison, if we choose the latter option? I believe that if we choose comparison across time and space, the materiality and the social have a stronger potential to collide and provide new insights. For example, if we study settlement patterns through archaeological evidence, compare them within the region as a basis of archaeological approaches, we can draw conclusions limited to strictly contemporaneous and, in *stricto sensu*, comparable sites. But if we open this up to include anthropological insights too, then it will become more obvious that settlement patterns are not the only reflections of settlement organization. On the contrary, settlement patterns can be understood as codes for kinship and wider social organization. It was already well documented by Raymond Firth and Jack Goody that changes in dwelling places also constitute changes in the composition of domestic groups,

¹⁵⁴⁸ AAA 2021.

or more recently that domestic and communal architecture is in itself a code of kinship.¹⁵⁴⁹ Hence we should think of settlement patterns not only as the material remains to be studied through natural science methods, but also through qualitative analyses and cross-cultural interpretations, complemented by ethnographic insights.

The above are the main benefits of bringing socio-cultural anthropological insights into archaeological interpretations. But what about the other way around? How may socio-cultural anthropologists benefit from archaeology? First, we should establish an agreement among socio-cultural anthropologists that generating a multiplicity of ethnographic accounts does not always lead to theoretical advancements. That implies that among anthropologists, equal weight should be accorded to historical anthropological insights as to conclusions based on participant observation. As I have shown in this book, concepts such as specified versions of the DMP can be further explored through archaeological evidence. For example, from Çukuriçi Höyük and Platia Magoula Zarkou it is obvious that not only did the Baruya and other PNG societies rely on regional exchange for reproduction but so did Aegean prehistoric societies. But why is this significant? Because anthropologists themselves have for decades taken the village as the main unit of analysis while only in exceptional cases looking at the wider regional contexts in which these villages were embedded. And whereas in anthropology today we know that more often than not villages were not self-reproducing entities, this can now also be explored through the archaeological evidence.

But how do these insights advance knowledge within socio-cultural anthropology? For example, in this contribution, I looked at the interpretation of craft organization within archaeology. I took one of the most popular models to interpret craft organization in archaeology, namely Costin's model, in which she distinguished between two types of craft specialists: independent and attached specialists. Following her categories of context, concentration, scale, and intensity of production, her categories turned out not to align completely with craft integration in non-state, sedentary societies. By reassessing Costin's model through ethnographic cases, I was able to extend her model, which now distinguishes between restricted and generalized integration among independent specialists. This is an example of how to generate new theories and concepts that could travel beyond time and space, which could further stimulate conversations between socio-cultural anthropologists and prehistoric archaeologists regarding the organization of craft and political economies. These models, in their revised form, can then be re-explored through participant observation, archaeological excavations, and comparative methods.

In the preface to *The Art of Not Being Governed: An Anarchist History of Upland Southeast Asia*, James Scott made the following statement that has resonated with me ever since:

'First, there is nothing original here. I repeat, there is not a single idea here that originates with me. What I surely have done is to see a kind of immanent order or argument in a good many of the sources I canvassed and to draw that argument out to see how far it would take me. The creative aspect, if there was any, was to make out this gestalt and to connect the dots.'¹⁵⁵⁰

That may be sufficient for a political scientist, which is Scott's academic qualification, but is such an approach not too derivative for a socio-cultural anthropologist? In my case deprivation from 'Amongitis' (as Leach famously labelled the professional habit of always referring to one's own ethnographic experience 'among' the so-and-so) was the consequence of not conducting any long-term fieldwork far from or close to home, by following people and participating in their everyday activities. In turn, I have tried to immerse myself by reading between the lines in multiple ethnographic reports, not limited to a particular geographic region.

¹⁵⁴⁹ Heady – Szołtysek 2017.

¹⁵⁵⁰ Scott 2009, xi.

Moreover, by immersing myself in the Early Bronze Age and parts of Neolithic Aegean times, I have, similarly to Scott, tried to connect the dots by tracing common features that formed past and more recent sedentary, non-state societies there. If we consider both archaeological data and ethnographic observations as dots, similar to Scott's approach outlined above, then only by connecting these dots can we speak of *Gestalt* (configuration), an organized overall form being more than just the sum of its parts.¹⁵⁵¹ Is it not *Gestalt* – 'full sweep and complexity of cultures across all of human history'¹⁵⁵² – that socio-cultural anthropology continues to be interested in? And can we ever address *Gestalt*, including similarity and difference, proximity and remoteness, if not through comparison?

¹⁵⁵¹ *Gestalt* in its original philosophical connotation refers to the characteristics of a whole that depends on the specific configuration of its parts (von Ehrenfels 1890).

¹⁵⁵² AAA 2021.

IX. Abstract – Zusammenfassung – Özet

Abstract

This interdisciplinary research examined the role of households during the Early Bronze Age (EBA, beginning of the 3rd millennium BC) in the Aegean basin from socio-cultural anthropological perspectives. The project dealt with households and social organization at two prehistoric sites: Platia Magoula Zarkou (Thessaly, Greece) and Çukuriçi Höyük (western Anatolia, Turkey). The study relies on a household archaeology approach to analysing prehistoric material finds, which were here contextualized through methods of historical anthropology. The first objective addressed the role of households: were households at Çukuriçi Höyük and Platia Magoula Zarkou Domestic Mode of Production households or were they more specialized units, primarily geared to production for exchange and/or tribute? The second objective questioned which of the ideal types or models of non-state social organization (e.g. segmentary (lineage) systems, big man society, great man society, and chiefdom with and without conical clan) is appropriate to describe the social organization in these settlements, if any?

The study shows that households at Çukuriçi Höyük and Platia Magoula Zarkou were of the Domestic Mode of Production type,¹⁵⁵³ primarily geared towards local consumption but simultaneously embedded in regional mixed economies. Households examined in this study always entertained social and economic relations with other households inside their settlements and elsewhere in the region. Although primary subsistence activities were organized within or by households, they were *a priori* entangled in regional social networks and embedding regional economies during the Late Neolithic and Early Bronze Age. These regional economies included unevenly distributed centres of craft specialization that were integrated into their respective Domestic Mode of Production. This study shows that whereas the record from Çukuriçi Höyük resembles a great man model of social organization, the record from Platia Magoula Zarkou indicates stronger similarities to a big man model of social organization, although other contemporaneous regional sites have previously been classified as chiefdoms. This implies that multiple types of socio-political organization coexisted in time and space in the Aegean basin's Early Bronze Age.

Zusammenfassung

Diese interdisziplinäre Studie untersuchte die Rolle von Haushalten während der Frühbronzezeit (Anfang des 3. Jahrtausends v. Chr.) im ägäischen Becken aus Sicht der Sozial- und Kulturanthropologie. Das Projekt befasste sich mit Haushalten und sozialer Organisation an zwei prähistorischen Stätten: Platia Magoula Zarkou (Thessalien, Griechenland) und Çukuriçi Höyük (Westanatolien, Türkei). Die Untersuchung stützt sich dabei auf einen haushaltsarchäologischen Ansatz bei der Analyse prähistorischer Materialfunde, die hier mit Methoden der historischen Anthropologie kontextualisiert wurden. Die erste Zielsetzung bestand darin, die Rolle der Haushalte zu analysieren: Waren die Haushalte in Çukuriçi Höyük und Platia Magoula Zarkou Haushalte mit „*Domestic Mode of Production*“ oder waren sie

¹⁵⁵³ Sahlins 1972.

spezialisierte Einheiten, die in erster Linie auf Produktion für Austausch und/oder Tribut ausgerichtet waren? Eine weitere Fragestellung war, welche der Idealtypen nichtstaatlicher sozialer Organisation (z. B. segmentäres Abstammungssystem, „great man“- oder „big man“-Gesellschaft und Häuptlingtum mit oder ohne konischem Klan) geeignet ist, die soziale Organisation in diesen Siedlungen zu beschreiben, wenn dies überhaupt möglich ist.

Die Studie zeigt, dass die Haushalte in Çukuriçi Höyük und Platia Magoula vom Typ des *Domestic Mode of Production* waren,¹⁵⁵⁴ die in erster Linie auf den lokalen Konsum ausgerichtet, aber gleichzeitig in regionale „mixed economies“ eingebettet waren. Die in dieser Arbeit untersuchten Haushalte unterhielten stets soziale und wirtschaftliche Beziehungen zu anderen Haushalten innerhalb ihrer Siedlungen und anderswo in der Region. Obwohl die primären Subsistenztätigkeiten innerhalb der Haushalte oder von diesen organisiert wurden, waren sie während des Spätneolithikums und der Frühbronzezeit a priori in regionale soziale Netzwerke und die Einbettung regionaler Ökonomien verstrickt. Zu diesen „regional economies“ gehörten ungleichmäßig verteilte Zentren der handwerklichen Spezialisierung, die in ihre jeweiligen heimischen Produktionsweisen integriert waren. Während die Befunde von Çukuriçi Höyük dem Idealtyp der sozialen Organisation eines „great man“ ähneln, zeigt diese Studie, dass jene von Platia Magoula Zarkou stärkere Ähnlichkeiten mit dem Idealtyp einer „big man“-Gesellschaft aufweisen, obwohl andere zeitgleiche regionale Standorte zuvor als Häuptlingsdomänen klassifiziert wurden. Dies weist darauf hin, dass auch in der frühbronzezeitlichen Ägäis mehrere Typen von sozio-politischer Organisation zeitlich und räumlich nebeneinander existierten.

Translation: Deepl Translate, edited by Maria Röcklinger and Andre Gingrich

Özet

Bu disiplinler arası araştırma, Ege havzasındaki Erken Tunç Çağı (MÖ 3. binyılın başı) ailelerin rolünü sosyokültürel antropolojik perspektiflerden incelemiştir. Proje, iki tarih öncesi yerleşim yerindeki hane halkı ve sosyal örgütlenmeyi ele aldı: Platia Magoula Zarkou (Teselya, Yunanistan) ve Çukuriçi Höyük (Batı Anadolu, Türkiye). Bu çalışma, bu noktada tarihsel antropoloji yöntemleri aracılığıyla bağlamsallaştırılan tarih öncesi malzeme buluntularını analiz etmek için bir ev arkeolojisi yaklaşımına dayanmaktadır. İlk hedef olarak hanelerin rolü ele alındı: Çukuriçi Höyük ve Platia Magoula Zarkou'daki haneler “*Domestic Mode of Production*” haneler miydi,¹⁵⁵⁵ yoksa esas olarak takas ve/veya hürmet için üretime yönelik daha özel birimler miydi? İkinci hedef, devlet dışı sosyal örgütlenmenin ideal tiplerinden veya modellerinden hangisinin (örneğin, parçalı (soy) sistemler, büyük adam toplumu, üstün adam toplumu ve konik klanlı ve konik klansız şeflik) eğer varsa bu yerleşimlerdeki sosyal organizasyonu tanımlamak için uygun olduğunu sorguladı.

Bu çalışma, Çukuriçi Höyük ve Platia Magoula'daki hanelerin, esas olarak *Domestic Mode of Production*, ancak aynı zamanda da bölgesel karma ekonomilere yerleşmiş bir yerel üretim tarzına sahip olduğunu göstermektedir. Bu çalışmada incelenen haneler, her zaman kendi yerleşim yerlerindeki ve bölgenin diğer yerlerindeki hanelerle sosyal ve ekonomik ilişkiler içinde olmuştur. Her ne kadar birincil geçim faaliyetleri hane halkları içinde veya hane halkları tarafından organize edilse de, Geç Neolitik ve Erken Tunç Çağı boyunca bölgesel sosyal ağlara ve bölgesel ekonomilere gömülmüşlerdi. Bu bölgesel ekonomiler, kendi yerel üretim biçimlerine entegre edilmiş, eşit olmayan şekilde dağıtılmış zanaat uzmanlık merkezlerini içermekteydi. Bu çalışma, Çukuriçi Höyük kaydının muhteşem adam sosyal örgütlenme

¹⁵⁵⁴ Sahlins 1972.

¹⁵⁵⁵ Sahlins 1972.

modeline benzediğini gösterirken, Platia Magoula Zarkou kaydının, diğer çağdaşlaşmış bölgesel alanlar daha önce şeflik olarak sınıflandırılmış olmasına rağmen, büyük adam sosyal örgütlenme modeliyle daha güçlü benzerlikler ortaya koyduğunu göstermektedir. Bu durum, Ege havzası Erken Tunç Çağı'nda zamanında çok sayıda sosyopolitik örgütlenme türünün bir arada bulunduğunu göstermektedir.

Translation: Aynur Uysal

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